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ABSTRACT

The papers presented at this conference focus on instructional technology in community/junior colleges. The keynote speaker, F. Elkins, addresses the problem of involving faculty in a Learning Resources Program--teaching faculty to utilize available media materials and to develop their own materials, in order to provide students with alternate learning experiences. D. Perrin discusses several models of media center operation and calls on media personnel to become actively involved in curriculum and instruction. B. Folks discusses two new programs at Guilford Technical Institute, a campus-wide peer-tutorial program and self-instructional courses offered for credit through the Learning Resources Center. M. Vollum presents an annotated list of nonprint materials on instructional accountability, objectives, development, and other teaching related topics. J. Craig describes a model for the term approach to instructional development. G. Cook presents a staff development module on competency-based learning systems. H. Field describes Northern Virginia Community College's Extended Learning Institute, which is designed for students unable to take part in regular campus courses. Finally, V. Trowbridge discusses evaluation of instructional development. (MJK)

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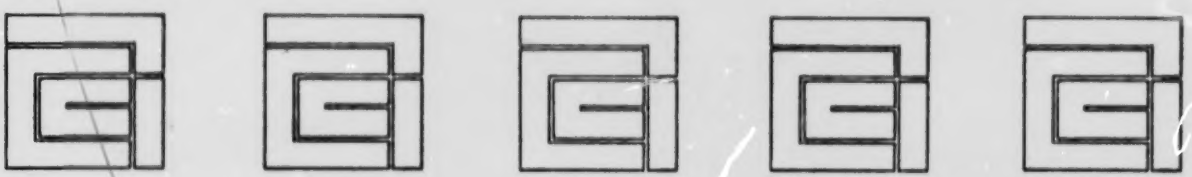
CCAIT Conference



Northern Virginia Community College

May 2-3, 1975

JC 750 416

PROCEEDINGS OF THE
CCAIT CONFERENCE
ALEXANDRIA CAMPUS

NORTHERN VIRGINIA COMMUNITY COLLEGE
MAY 2-3, 1975

Edited by

Gloria H. Terwilliger, Ed.D.
Conference Chairman
CCAIT Southern Regional Vice President

PROCEEDINGS OF THE CCAIT CONFERENCE

ALEXANDRIA CAMPUS, NORTHERN VIRGINIA COMMUNITY COLLEGE

MAY 2-3, 1975

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PROCEEDINGS OF THE
CCAIT CONFERENCE
ALEXANDRIA CAMPUS
NORTHERN VIRGINIA COMMUNITY COLLEGE
May 2-3, 1975

Educators engaged in the teaching-learning process throughout the East gathered at the Alexandria Campus of the Northern Virginia Community College May 2 and 3, 1975 for a searching evaluation of the instruction process in a conference called: "Content/Design".

The conference was sponsored by the Community College Association for Instruction and Technology, a national organization of educators interested in discovering and disseminating information concerning the problems and processes of media and technology in the community and junior college teaching-learning environment.

CCAIT Southern Regional Vice President, Dr. Gloria Terwilliger, who chaired the conference, serves as Director of the Learning Resource Center at the Alexandria Campus of NoVa.

The Alexandria Campus is one of the five campuses of the Northern Virginia Community College; the four-story megastructure is a total learning environment in which space forms follow functions. Students, faculty and staff work and study in barrier-free settings. Faculty offices, conference workrooms, dispersed counseling, audio-visual services, learning laboratories and other services are placed at the hub of the campus in a center for learning resources. The campus also houses the TICCIT (Time-shared Interactive Computer-Controlled Instructional Television) project being developed through a National Science Foundation grant to the Mitre Corporation. Through TICCIT, students presently study mathematics through color televisions with computer hookups.

CCAIT Conference

Northern Virginia Community College

May 2-3, 1975

Friday Activities

4:00 pm	Registration, Level I
4:00 pm -- 7:00 pm	Concurrent Activities Conference Headquarters - 106: Conversation, Coffee, Tea Film screenings - 110 Learning Lab - 344, Professional Development Materials Library - Level II: Cassette tour A-V Services - Level III: Guided tour (Campus tours arranged in 106, 4:00-7:00, 9:00-10:00 pm)
7:00 pm	Banquet - Level I Host: Dr. Donald Bisdorf, Provost, Alexandria Campus Speaker: Dr. Floyd Elkins, Provost, Woodbridge Campus "Human Interaction in a Learning Resources Program"
9:00 pm -- 10:30 pm	Conference Headquarters and campus open for shoptalk and exploration; Film screenings in 106
10:30 pm	Shuttle bus to South Gate Motel

Saturday Activities

8:00 am — Registration, Level I
Film screenings, 110-111

8:30 am — Shuttle bus leaves South Gate Motel for Alexandria Campus

9:00 am — General Session, 110-111
Presiding, Dr. W. Belmore
Speaker: Dr. Donald Perrin, Professor, University of Maryland
"Instructional Development in an Academic Setting"

9:45 am — Concurrent Sessions until Noon

The TICCIT System will be running from 9:45 am to 12:00 Noon

	Topic	Room
9:45 am	Competency-Based Instruction Dr. Cook	319
	Extended Learning Institute Dr. Field	320
	Team Approach to ID J. Craig	321
	Education--Cognitive Style Dr. Niles	322
	Professional Development Dr. Vollum	323
11:00	Subject Area ID: Biology, Chemistry, Physics	327
	Extended Learning Institute Dr. Field (R)	320
	Subject Area ID: English	321
	Education--Cognitive Style Dr. Niles (R)	322
	Evaluation of ID - Dr. Trowbridge	323
	Subject Area ID: Health Technologies	319

12:00 — Table Top Talk -- Luncheon Discussion, Cafeteria
Hosts:
Dr. Elkins: More Instructional Analysis
Dr. Perrin: Socratic Dialogue
Dr. Belmore: Copyright and ID
B. Foiks: Peer Tutoring
Dr. Mizell: Planning for a Regional ID Group
Dr. Trowbridge: Role Definition in ID

Tables and Topics have been designated. Additional tables are available for free-form discussion.

1:30 pm — Concurrent Sessions

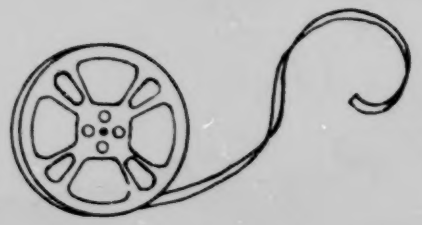
Topic	Room
Competency-Based Instruction - Dr. Cook (R)	319
Subject Area ID: Biology, Chemistry, Physics	327
Team Approach to ID - J. Craig (R)	321
Subject Area ID: English	322
Evaluation of ID - Dr. Trowbridge (R)	323
Subject Area ID: Health Technologies	320

2:45 pm — General Session, 110, 111
"This is the Way the Conference Ends - Not With A Whimper, But A Bang"

A Multimage Wrap-up
Dr. Donald Perrin

Farewell
Gloria Terwilliger, Conference Chairman

3:45 pm — Shuttle bus leaves for motel and/or Airport



MOVIES FOR CCAIT MEETING

MAY 2, 1975

4PM - 7PM

CLIO AWARDS - COMMERCIALS OF 1970
CURIOUS HABITS OF MAN
TIME PIECE
CLIO AWARDS - COMMERCIALS OF 1972
WHY MAN CREATES
MINNIE THE MOOCHER
TIME IS
HELP! MY SNOWMAN IS BURNING DOWN

9:00PM - 10:30PM

DAYS OF DYLAN THOMAS
STILL WATERS
OCCURRENCE AT OWL CREEK BRIDGE
EYE OF MAN

PRESENTED BY

ALEXANDRIA
LRC

AUDIO-VISUAL SERVICES

4PM - 7PM May 2

CLIO AWARDS - Commercials of 1970 40 min.

CURIOUS HABITS OF MAN 13 min.
Shows the behavioral changes in guests at a cocktail party. These new behaviors are compared to similar animal-like behaviors through the imaginative eyes of a boy who is observing the party.

TIME PIECE 10 min.
Presents a visual satire on a day in the life of contemporary man as he is motivated by advertising, hypnotized by movies, and surrounded by modern sex symbols.

CLIO AWARDS - Commercials of 1972 40 min.

WHY MAN CREATES 25 min.
Demonstrates in its form and content the nature of the creative process, and discusses the variety, richness and importance of creative vision. Each of the eight segments makes its own statement in its own style and technique.

MINNIE THE MOOCHER 10 min.
The original short with Betty Boop and her friends.

TIME IS 30 min.
Uses time lapse, animation, slow motion, and other unusual effects to create an exploratory presentation of time. Indicates that time is man's invention. Describes man's ability to change time from one situation to another.

HELP! MY SNOW MAN IS BURNING DOWN 10 min.
Surrealistic and humorous satire on the Madison Avenue image of the world through advertising.

9PM - 10:30 PM May 2

DAYS OF DYLAN THOMAS 27 1/2 min.
Perceptive study of the poet's turbulent life and the forces that shaped his work. Rare photos recapture his childhood on the Welsh sea coast, his youthful fling in London, his visits to the U.S., his bouts with extremes of happiness and despair. Interspersed throughout are candid remarks and readings by Dylan from his works.

STILL WATERS 14 min.
Life cycle of fish. A poetic combination of carefully chosen music and under-and-above water photography.

OCCURRENCE AT OWL CREEK BRIDGE 27 min.
Visually retells Ambrose Bierce's short story. The civil war and the play of man's imagination are faithfully captured in this classic of mood and atmosphere.

THE EYE OF MAN 13 min.
Presents a capsule history of Western art, viewed in terms of human perception.

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Keynote Speaker, May 2, 1975

Dr. Floyd Elkins, Provost, Woodbridge Campus, Northern Virginia Community College, Smoketown Road, Woodbridge, Virginia 22191.

Before coming to NVCC in 1973, Dr. Elkins was Academic Dean at Hinds Junior College in Raymond, Mississippi, where he worked extensively with faculty in implementing a systems approach to instruction. A review of the English program at Hinds Junior College can be found in College English, v. 35, no. 8, May, 1974. Dr. Elkins' Ph.D is from the University of Texas.

HUMAN INTERACTION IN COMMUNITY COLLEGE LEARNING RESOURCES PROGRAMS

I AM GOING TO SPEAK TO THIS TOPIC FROM THE POINT OF VIEW WE HOLD ON OUR CAMPUS AT THE LEARNING RESOURCES CENTER WHICH HAS NOT ONLY A LEARNING RESOURCES PROGRAM FOR THE STUDENTS ENROLLED IN THE COLLEGE, BUT ALSO FOR THE FACULTY OF THE COLLEGE. WE THINK THE LRP SHOULD INCLUDE RESOURCES FOR PROGRAM DEVELOPMENT BY LOCAL FACULTY. IN OUR ESTIMATION, THIS IS ACTUALLY THE KEY TO THE PROBLEM OF IMPLEMENTING HUMAN INTERACTION. AS FACULTY DEVELOP THEIR COURSES AND WORK TOWARD OFFERING THEIR STUDENTS A VARIETY OF LEARNING EXPERIENCES FOR EACH CONCEPT OR SKILL TO BE LEARNED DURING A COURSE, HUMAN INTERACTION MUST OCCUR BETWEEN THE LEARNING RESOURCES PROGRAM AND THE FACULTY BEFORE THIS INTERACTION CAN POSSIBLY OCCUR ON ANY SIGNIFICANT LEVEL WITH THE STUDENTS. IF THE FACULTY DO NOT SUPPORT THE FULL REALM OF OPPORTUNITIES AVAILABLE THROUGH THE LEARNING RESOURCES PROGRAM, THEN THE STUDENTS WILL NOT PARTICIPATE IN THESE OPPORTUNITIES AND YOU WILL FIND UNUSED LRC's.

THIS IDENTIFIES OUR PROBLEM. WE NOW HAVE A WIDE SELECTION OF KINDS OF ELECTRONIC MEDIA WHICH HAS BEEN PERFECTED THROUGH THE EXPERTISE OF AMERICAN INDUSTRY AND ENGINEERING AND IS AVAILABLE TO SCHOOLS AT A RELATIVELY LOW COST. WE ARE BEGINNING TO GET AT LEAST A MODERATE MARKET IN SOFTWARE THAT HAS BEEN DEVELOPED TO GO WITH THIS ELECTRONIC EQUIPMENT. IDENTIFYING AND LOCATING SOFTWARE OR THE DEVELOPMENT OF SOFTWARE TO SUPPORT COURSES THAT WE ARE OFFERING IN OUR CURRICULUM IS STILL ANOTHER PROBLEM WHICH I WILL ADDRESS LATER. BUT AT ANY RATE, WE HAVE THE HARDWARE, THE SOFTWARE, AND THE FACILITIES FOR THIS TO BE USED. WE ALSO HAVE FACULTY MEMBERS, OFFICES, CLASSROOMS, AND THOUSANDS OF STUDENTS ENROLLED ON OUR CAMPUSES. THE PROBLEM IS HOW DO WE GET AN INTERACTION BETWEEN THE MATERIAL

EQUIPMENT AND THE HUMAN BEINGS INVOLVED SO THAT THERE WILL BE A HIGHER DEGREE OF SUCCESS EXPERIENCED AMONG STUDENTS TO WHOM WE ARE OFFERING LEARNING OPPORTUNITIES WHICH WE ADVERTISE AS EXCELLENT ONES.

THERE ARE TOO MANY INSTANCES I KNOW OF PERSONALLY WHERE THERE IS ACTUALLY A CRITICAL LACK OF INTERACTION. THE EQUIPMENT IS THERE, THE SOFTWARE IS THERE, BUT ONLY 2% OF THE FACULTY ARE USING IT. THE DEVELOPERS GET ARTICLES PUBLISHED, SOMETIMES EVEN BOOKS, AND WHEN THE CAMPUS IS VISITED, IT IS VERY DIFFICULT TO SEE THE RESULTS OF WHAT YOU HAD PREVIOUSLY READ IN SOME PUBLICATION. IT IS VERY EASY FOR AN INSTRUCTIONAL DEVELOPER OR AN EDUCATIONAL TECHNOLOGIST TO SIT IN HIS/HER OFFICE AND DESIGN A SYSTEM OR DEVELOP PLANS THAT ARE PHILOSOPHICALLY SOUND AND RATIONAL AND THAT WILL WORK. THE QUALIFIER IS THAT YOU HAVE TO HAVE PEOPLE WITH A CERTAIN ATTITUDE AND A CERTAIN BACKGROUND OF EXPERIENCES, WHICH FREQUENTLY ARE ACQUIRED THROUGH SOME TYPE OF STAFF DEVELOPMENT PROGRAM TO INSERT INTO THE SYSTEM TO MAKE IT WORK.

I WOULD LIKE TO SPEND A FEW MOMENTS ADDRESSING THIS PROBLEM. I FIRMLY BELIEVE FIRST THAT WE, AS INSTRUCTIONAL LEADERS, SHOULD PRACTICE WHAT WE PREACH AND I THINK WHAT WE ARE PREACHING SHOULD BE IN LINE WITH AN ACCEPTED SCHOOL PHILOSOPHY AND ACCEPTED PROGRAM PHILOSOPHY. I ASSUME, IN MOST INSTANCES, WE ARE TALKING ABOUT THE INSTRUCTIONAL PROGRAM. THE PLACE TO START THE STUDENTS HERE, OF COURSE, IS WHERE THEY ARE WHEN THEY ENROLL IN A CLASS. WE TELL FACULTY NOT TO START A STUDENT AT A POINT IN ADVANCE OF HIS PRE-REQUISITE KNOWLEDGE. THIS MAKES LEARNING RELATIVELY IMPROBABLE. NOW IF WE TAKE A TRADITIONAL FACULTY MEMBER AND PUT THAT PERSON TOO

QUICKLY INTO A HIGHLY TECHNICAL ENVIRONMENT AND USE A TECHNICAL VOCABULARY WHEN ADDRESSING THIS FACULTY MEMBER, WE ARE GOING TO CAUSE A HIGH DEGREE OF ANXIETY AND FEELINGS OF INSECURITY ON THE PART OF THE FACULTY MEMBERS. YOU CAN ANTICIPATE THEIR RESPONSE THEN. THE FACULTY MEMBERS ARE GOING TO REJECT WHATEVER YOU ARE SUBJECTING THEM TO; THEY ARE GOING TO WANT TO GO BACK INTO THEIR OFFICES WHERE THEY ARE FAMILIAR WITH EVERYTHING -- WHERE THEY ARE SURROUNDED BY THEIR OWN BOOKS, WHERE THEY HAVE THEIR OWN NOTES ON FILE AND THEY ARE NOT UNDER THREAT. SO WHATEVER YOU DO, YOU WANT TO ELIMINATE THE POSSIBILITY OF THE FACULTY MEMBER RESPONDING IN THIS FASHION.

I AM SURE THERE ARE MANY WAYS TO IMPLEMENT THE PROPER LEVEL OF HUMAN INTERACTION IN A LEARNING RESOURCES PROGRAM AND THERE ARE PROBABLY WAYS THAT ARE SUPERIOR TO MY PLAN, BUT I HAVE THIS PLAN THAT I HAVE USED IN THE PAST WITH REASONABLE SUCCESS WHICH I WOULD LIKE TO SHARE WITH YOU. IT ALL STARTS WHEN WE BEGIN TALKING TO THE FACULTY ABOUT PROVIDING THE STUDENT WITH ALTERNATE LEARNING EXPERIENCES. BECAUSE MOST FACULTY WILL ACCEPT THE FACT THAT DIFFERENT PEOPLE LEARN DIFFERENT THINGS BY DIFFERENT MEANS AND AT DIFFERENT RATES, WE CAN START TALKING TO FACULTY ABOUT PROVIDING THE STUDENT THE OPPORTUNITY TO PARTICIPATE IN ALTERNATE LEARNING EXPERIENCES, USING EXAMPLES WITH WHICH THEY ARE FAMILIAR, SUCH AS TAKING NOTES DURING A LECTURE, READING AN ASSIGNMENT IN A BOOK, WRITING A PAPER, WORKING A SET OF SAMPLE PROBLEMS, DOING A PROJECT, CONDUCTING AN EXPERIMENT, OR ANY OF THESE TRADITIONAL KINDS OF LEARNING EXPERIENCES WE HAVE OFFERED IN THE PAST. THE PURPOSE HERE IS TO CAUSE THE FACULTY TO IDENTIFY A READING ASSIGNMENT IN THE BOOK OR LISTENING TO A LECTURE AND TAKING NOTES AS LEARNING EXPERIENCES. THEN WHEN YOU START TALKING

TO FACULTY MEMBERS ABOUT HAVING THE STUDENTS VIEW A VIDEO TAPE, LISTEN TO A CASSETTE TAPE, USE A SLIDE/TAPE PRODUCTION, OR USE A SOUND FILM STRIP, THEY WILL CONSIDER THESE AS MERELY ADDITIONAL LEARNING EXPERIENCES TO EITHER SUPPLEMENT OR PRECEDE THE ONES THAT HAVE TRADITIONALLY BEEN USED. IN OTHER WORDS, START THE FACULTY MEMBER WHERE HE IS. AND IF IT HAPPENS TO BE A FACULTY MEMBER WHO PRIMARILY IS A LECTURER TYPE, THEN YOU START HIM WITH HIS LECTURE AND HIS READING ASSIGNMENT AS TWO GOOD LEARNING EXPERIENCES AND ADD FROM THAT POINT.

I DEFINITELY OPPOSE THE IDEA OF GETTING A GROUP OF FACULTY TOGETHER AND HAVING AN INDIVIDUAL STAND UP AND LECTURE TO THEM ABOUT THE EVILS OF THE LECTURE. I HAVE TALKED TO A FEW PEOPLE ACROSS THE COUNTRY THAT HAVE RESEARCHED THE PROBLEM OF THE ADVANTAGES AND DISADVANTAGES OF THE LECTURE SYSTEM AND ONE COLLEGE THAT HAS BEEN INTO MEDIATED INSTRUCTION ON A PRETTY HEAVY BASIS FOUND OUT THAT STILL OVER 50% OF THEIR STUDENTS ACTUALLY WANT AN AUTHORITATIVE TYPE PRESIDING IN FRONT OF THE CLASSROOM FUNCTIONING PRIMARILY IN A LECTURER CAPACITY AND THESE STUDENTS WILL ACTUALLY LEARN BETTER IN THIS ENVIRONMENT. CONSEQUENTLY, I THINK THE INSTRUCTIONAL DEVELOPMENT LEADERSHIP SHOULD NEVER TRY TO TELL A FACULTY MEMBER THAT WHAT THEY HAVE DONE IN THE PAST, SUCH AS LECTURE, WAS ALL WRONG. IN MY OWN CASE, FOR INSTANCE, I TEACH A SOCIOLOGY CLASS A COUPLE OF TIMES A YEAR AND ALTHOUGH I USE A COMBINATION OF LECTURE AND MEDIA, I WILL CHALLENG ANYBODY TO SHOW ME SOFTWARE THAT WILL DO A BETTER JOB TEACHING STUDENT THAN I CAN PERSONALLY DO IN THE CLASSROOM IF THE SOFTWARE AND I ARE BOTH TEACHING TO THE SAME OBJECTIVE. NOW IF I WOULD STOP THIS STATEME AT THIS POINT, YOU MIGHT THINK THAT I WAS OPPOSED TO THE WHOLE IDEA.

HOWEVER, I WANT THAT SOFTWARE -- I WANT IT TO SUPPLEMENT WHAT I AM TEACHING IN THE CLASSROOM. I WANT IT TO BE IN THE LRC IN CASE STUDENTS MISS A CLASS -- THEY CAN GO TO THE LRC AND GET IT. I WANT IT FOR STUDENTS WHO, FOR SOME REASON OR OTHER, WANT TO SELF-PACE THEMSELVES -- THEY EITHER WANT TO FINISH EARLY OR THEY HAVE TO FINISH LATE AND CANNOT ATTEND THE CLASSES AS SCHEDULED. I DEFINITELY WANT THAT SOFTWARE THERE WITH THE ELECTRONIC EQUIPMENT IT TAKES TO OPERATE IT.

NOW BACK TO ANOTHER PROBLEM I MENTIONED EARLIER -- THE IDENTIFIC AND LOCATION OF SOFTWARE TO SUPPORT YOUR COURSES. FREQUENTLY, THIS IS A VERY DIFFICULT TASK, ESPECIALLY IN THE HUMANITIES AND SOCIAL SCIENCES, AND SOMETIMES IN COMMUNICATIONS. IF FACULTY CANNOT LOCATE ANYTHING COMMERCIALLY, THEN YOUR LEARNING RESOURCES PROGRAM SHOULD HAVE IN IT THE PROVISIONS FOR FACULTY TO DEVELOP THEIR OWN SOFTWARE. I HAVE DEVELOPED A SCHEME OR A SYSTEM THAT SIMPLIFIES THIS TO A GREAT EXTENT FOR OUR INSTITUTION BUT WE WILL NOT BE GOING INTO THAT RIGHT NOW.

TO RETURN TO OUR MAJOR TOPIC, THE INTERACTION BETWEEN THE HUMAN BEINGS INVOLVED AND THE MATERIAL THINGS IN THE LEARNING RESOURCES PROGRAM -- IF THE FACULTY MEMBERS, IN STRUCTURING THEIR COURSES, HAVE ACTUALLY PROVIDED PRINTED MATERIAL IN A FORMAT SUCH AS THIS TO COMMUNICATE TO THE STUDENTS WHAT MATERIALS ARE AVAILABLE IN THE LRC THAT ACCOMPANY EACH OBJECTIVE THE STUDENT SHOULD MEET AS HE GOES THROUGH THE COURSE, (NOTICE, THIS IS A TWO COLUMN FORMAT WITH LEARNING OBJECTIVES IN THE LEFT COLUMN AND LEARNING EXPERIENCES LISTED IN THE ADJACENT COLUMN ON THE RIGHT.) THEN THE PROBABILITY WILL BE MUCH GREATER THAT THERE WILL BE INTERACTION BETWEEN THE

STUDENT AND THE LEARNING RESOURCES CENTER AND STUDENT SUCCESS WILL BE AT A HIGHER LEVEL. THE POINT HERE IS, IF A FACULTY MEMBER DOES NOT ACTUALLY PROGRAM THESE MATERIALS INTO THE COURSE, THEN THE PROBABILITY WILL BE LOW THAT THE STUDENT IS GOING TO INTERACT WITH THE LRC. ALSO THE PROBABILITY IS VERY LOW THAT FACULTY MEMBERS THEMSELVES WILL EVEN PARTICIPATE IN THE SELECTION AND PURCHASING OF MATERIAL IF THESE EXPERIENCES ARE NOT PROGRAMMED INTO THE COURSE IN ADVANCE AND I DARE SAY THAT FACULTY WOULD NEVER PARTICIPATE IN THE DEVELOPMENT OF THEIR OWN SOFTWARE.

TO OFFER A FEW TOKENS OF ADVICE, EVOLVED THROUGH EXPERIENCES IN WORKING WITH FACULTY IN THIS TYPE OF PROGRAM, I SUGGEST THE FOLLOWING:

1. START THE FACULTY WHERE THEY ARE.
2. USE AN UNDERSTANDABLE LANGUAGE - AVOID UNNECESSARY JARGON.
3. DEVELOP A REALISTIC TIME SCHEDULE - DON'T EXPECT TOO MUCH IN TOO SHORT A TIME.
4. DON'T OVERWHELM FACULTY WITH TOO MUCH AT ANY ONE TIME,-- IT IS POSSIBLE TO BLOW A FACULTY MEMBER'S MIND AND HE'LL BREAK AND RUN AND NEVER COME BACK.
5. KEEP IT SIMPLE.
6. PROGRAM YOUR IMPLEMENTATION SYSTEM JUST LIKE YOU WOULD LIKE FOR FACULTY TO DEVELOP THEIR OWN INSTRUCTIONAL SYSTEMS. USE A SLOW BUT STEADY PACE OF PROGRESSION.
7. PROVIDE CONCERNED COMPETENT LEADERSHIP.

HOWEVER, IN ORDER FOR THIS KIND OF PROGRAM TO MATERIALIZE, THE INSTITUTION YOU ARE WORKING IN MUST PERCEIVE ITSELF AS AN INSTITUTION PRODUCING A PRODUCT AND STUDENT LEARNING IS THE PRODUCT, AND THE INSTITUTION MUST BE CONTINUALLY STRIVING TO INCREASE THE LEVEL OF PRODUCTIVITY IN STUDENT LEARNING AND TO DECREASE STUDENT FAILURE AND ATTRITION. THIS CAN BE DONE MOST EFFECTIVELY BY OFFERING AS MANY ALTERNATIVES FOR STUDENT LEARNING AS POSSIBLE BASING THIS

ENTIRE PROPOSAL ON THE LEARNING PRINCIPLE, DIFFERENT PEOPLE LEARN DIFFERENT THINGS AT DIFFERENT RATES AND BY DIFFERENT MEANS. HOWEVER, YOU MUST CONSIDER THE ECONOMIC LIMITATIONS UNDER WHICH YOU MUST OPERATE, RECOGNIZE THESE RESTRICTIONS, AND MAKE PLANS BY PRIORITY. WHEN YOU DO THIS YOU WILL BE PLEASED TO FIND, IN MANY INSTANCES, THAT THE TOP PRIORITIES -- THE MOST EFFECTIVE MEANS -- ARE THE LEAST EXPENSIVE.

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Speaker, General Session

Dr. Donald Perrin is an Associate Professor in the Department of Educational Technology at the University of Maryland. He had an extensive background in film-making and photography prior to taking his doctorate at the University of Southern California. Dr. Perrin is noted for his productions, in the multi-image format. He has done extensive consulting work, with emphasis on the handicapped.

INSTRUCTIONAL DEVELOPMENT IN AN ACADEMIC SETTING

By Dr. Don Perrin

This has been a busy year. Most of us are under the crunch of accountability. Most of us are being squeezed to reduce expenditures and most of us are seeing our media operations, which were minimal in the past, being shrunk to something less. Some of you are innovative enough to capitalize on times like these to make some necessary changes. Instructional technology is an integral part of instruction, and instructional development is one way to help your Dean and faculty improve instruction despite high enrollments, and diminishing dollars. The difficult decisions in education today relate to the quality of instruction. We people in the media business -- whether we specialize in print or non-print, or a combination of the two -- have the resources and the expertise to improve instruction. We can play a key role in improving instruction in the schools and colleges.

Let me make an observation. The elementary schools, colleges and junior colleges have a very strong emphasis on teaching, helping the learner to learn by whatever means are available. High schools and universities are oriented to subject areas. They will take longer to feel the effects of instructional development and the products of instructional technology. In the state of Maryland I see extensive media and instructional development programs in our junior colleges and community colleges, and a predominance of traditional programs in the universities - particularly at the graduate level. A recent survey of one division of the University of Maryland (the Division of Human and Community Resources, on the College Park Campus) found that twenty percent of the faculty wanted no help in course development! Were these research professors, or writers, or philosophers who communi-

cate only with words? No! They were professors of education and administrators of their respective departments. The survey also found that most professors do not use the media service or even their secretary to order materials. Almost fifty percent of the respondents produced some media of their own, including slides, tapes, and overhead projectuals. Many on the campus had no room darkening or projection screens. One of the newest buildings had poor acoustics. The same building was wired for television but no monitors were installed.

Today's college administrator is under fire from students and outsiders about the poor quality of instruction. He has just so many dollars that can be used for the improvement of instruction. "Instructional development" is the "in" thing.

At Michigan State University a small administrative unit stimulates proposals, and provides resources in the appropriate quantities for projects of high priority which have a high probability of success. The instructional development program at Syracuse University is administered by Dr. Robert Diamond, Vice Chancellor for Instructional Development. He has a small dedicated staff who work with the faculty to develop instructional pages of various kinds. The Michigan State program awards funds; the Syracuse program provides the expertise and production capability from the same office. If you're going to develop a course, you don't develop a better lecture because once the words are spoken they're gone; once the chalkboard is erased, that's gone. But written and media messages can be edited and refined to achieve their desired objectives. Bob Diamond disappoints me because he used to be a television producer, yet he rarely uses television. His instructional packages contain mostly printed materials to facilitate their use in extension courses. This is a paradox since we usually relate instructional develop-

ment to innovative programs and the audio-visual tradition.

But realistically, when you start developing materials, the initial planning is in print and you package some of it in print. Instructional development is an investment. A few additional dollars in some very relevant place can result in a big payoff for a large number of students, perhaps even a continuing payoff over two or three years or more. The most conspicuous advantage occurs for very large classes. You immediately protest; "what about the small classes? Are classes of limited size and visibility not suited for this approach?" Well, if you've got some big ones to justify the investment, you can invest some of the dividends in the smaller classes. Sometimes you can save a lot of money by just developing materials for a few students. You can solve particular kinds of instructional problems the faculty doesn't have the time to solve. But piece by piece, if every faculty member in every college in the United States were to put together one lesson in mediated format, and if every school teacher K-12 were to do the same thing, we'd have many more materials than we now have in all our indexes put together. The important thing is that what we develop should be quality material.

A third instructional development model is the one that's used in the State University of New York (SUNY) system. The instructional developer acts as a free agent. He may visit a faculty member in his office, asking how many times a week do you meet that class? 5 times? Could you make better use of your time if you met them four times or maybe three? What's the catch? There's no catch. A faculty member who invests time in developing materials that can be used in the media center can use the time saved for other things -- for advising, for research,

for developing new lessons or more packages. And teachers are buying this approach!

When you look at education many of us are replicating the same kinds of lessons; reinventing the wheel as it were. Do you ever exchange materials with anybody? How about audio visual materials? Do you copy materials? Do you replicate copyrighted materials? Many people break the copyright law because there is no reasonable basis by which the originators can be paid for their creative efforts. We haven't been invaded in the classroom or a convention hall yet, but the day will come if we're blatant enough. I see schools record television programs off the air to hold them for somebody to use next week. For some reason or other they're so busy in that media center they never get around to erasing the programs; they stay on the shelves and are reused. Instructional development may be the solution to this illegality. You have sufficient funds to do new production and the product you finish up with is yours with no copyright problems. The value of having your own materials and freedom to do what you like with them is tremendously important.

Instructional development is a lot of things, but in most innovative programs one of the key elements is individualization. You can't have individualization without materials; you can't have materials without somebody buying them or producing them. And so that focuses right back to the media business. We are designers, producers, and merchandisers of materials as well as maintainers of loan collections of commerically produced materials.

I have a few comments to make about the field of instructional technology. Some of you have witnessed a tremendous growth - others feel it doesn't exist anymore. The growth curve exhibits a slow take off and a relatively rapid growth and

then it dissipated. It was accepted and incorporated into many other disciplines. People still use the word but the National AudioVisual Association says, "We can't sell "technology". Technology represents everything that's bad in our society today -- the Vietnam War, pollution, the SST -- the failures of this last decade are products of technology, so if you're trying to sell technology, forget it!" Legislators do understand individualized instruction; the need for innovation, and the role of print and non-print media. They understand the need for alternative modes of learning but they don't understand instructional technology. We have to redefine our field and concepts such as instructional development, and individualization gives us a direction for that redefinition. I believe the National Association (AECT) is going to be faced with the problem within two years.

In Maryland and many other states we now have a unified media program. The same trend is evident at the college level. In Maryland both the library and audio visual associations changed their names. Once a year they have a joint meeting. The credentials and training programs are now joint programs. But the stereotype of the audio-visual boys and the media gals will be with us for some time to come!

All of us will be required to focus more of our attention on instruction, and this fits nicely under this "instructional development" umbrella. Many of us are rather specialized in our backgrounds. Some of us are primarily print-library oriented; some of us are primarily audio-visual; and some of us relate primarily to teaching and administration. There are four areas that are crucial to our effectiveness now and in the future. One is our knowledge of our own resources, our ability to locate materials, design materials, produce materials, or whatever. As we design, select, and evaluate we are generating curriculum. To be effective, we must become a part of the instructional team. Today's media personnel do have a background in curriculum and learning and teaching. When a teacher or professor says

"Wheel in the projector; that's all I want from you," it shows that others do not see us as we see ourselves. We have a lot of selling to do. So long as we ally ourselves with books or technology (and not with instruction) our real potential will not be realized. Today's media personnel must have expertise in curriculum, administration, print and non-print media, and the design and production of audio visual materials. A Master's Degree is minimal, and I find myself in the position of my mentor, Jim Finn, who 12 years ago got up in front of the profession at the National Convention and said, "If we're going to survive as a field, the time has come to go back to school." A lot of us are still pushing AV carts or filing catalog cards, and a lot of us still haven't gone back to school to learn all the things our profession now requires. The present economic recession is a good time for planning; to do a little homework; to go back to school. It is also a good time to demonstrate the value of instructional development, which after all is just a systematic way of investing instructional dollars to achieve a more favorable cost-benefit ratio.

Bob Diamond started into instructional development by revitalizing a basic music course at Fredonia, N. Y. The course was designed for non-majors, and included various options, self pacing, and other innovative techniques. The product was so good that the majors in music also wanted to take it.

Conventional instruction does not give students the flexibility and the freedom they need. Who is the person in your college who knows the most about materials, learning environments, and the various options by which students can learn? Perhaps it is you, or it should be you. If we cease to grow in these areas and to supply desired services, then somebody else must take over. Let me give you an example: At Wildlake High School in Columbia, Md., the media center which is the

whole central core of the school, is little used. I observed a wall of bookcases down the middle; one side was print and the other side was non-print. Equipment was not mounted in the carrels for security reasons, while the print collection at the end of three years had reached only 40% of the state minimum standard. But the open space classrooms were a hive of activity. I saw equipment and materials all over. I asked, "Do these belong to the library?" The teachers said, "Oh no, we buy our own; we have our own budgets: we buy our materials and manage them ourselves. Everything is right here where we use it." When the classroom becomes its own media center, we need to redefine the purpose of the central media service. There may be some larger functions like television, production, and instructional development which become our major role. And when we are not in our media centers, we belong in classrooms and on curriculum committees. Our traditional roles are becoming obsolete; we must equip ourselves for our new roles in instructional design and development.

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session, May 3

Programs at Guilford Technical Institute

In the Winter Quarter of 1973-1974 and the Summer Quarter of 1974, two new programs were introduced at Guilford Technical Institute, Jamestown, North Carolina. First was a campus-wide tutorial program in which students tutor their peers in a one-to-one situation. Second was the development of self-instructional courses offered for credit and administered through the Learning Resource Center. At the CCAIT Conference in Alexandria, Virginia, Beverly N. Folks discussed these programs in detail.

GUILFORD TECHNICAL INSTITUTE • JAMESTOWN, NORTH CAROLINA 27282

March 5, 1974

TO WHOM IT MAY CONCERN:

The "Peer" Tutorial Program at Guilford Technical Institute was officially started January 7, 1974. The program was organized and implemented by a full-time Tutorial Coordinator under the direction of the Dean of Learning Resources.

Being a new program, it was designed to be flexible enough to change as problems arose. The following information concerns the type of tutorial approach, the organization, the financing, etc.,and a discussion of problems encountered.

The program was first organized in an attempt to provide sociological and psychological help and reinforcement for students; to reduce attrition and to improve retention; to provide individualized academic help; and to improve a sense of campus community among students.

When the Tutorial Program first implemented, specific policies were decided upon. Some policies were strengthened, some were changed and still others remained the same. These policies included:

1. Number of Hours - Each tutor will tutor each student a maximum of five hours for each subject for which approved and assigned to tutor each week. Request to tutor in excess of five hours per week, per student, will be considered by the Tutorial Coordinator after consultation with the teacher of the student involved. Each tutor will be limited to a maximum of ten hours of tutoring per week.

   Comment: This policy was not changed. Very rarely did a student ask to be tutored longer than five hours a week per subject. The only time this situation arose was during exam time. The average time spent by a tutor in tutoring sessions was five hours a week although he was allowed 10 hours.

GREENSBORO 292-1101 • HIGH POINT 454-1126

2. Number of Students per Tutoring Session - Students are to be tutored individually unless specifically approved by the Tutorial Coordinator.

   Comment: Approval was given to a tutor tutoring more than one student if they were working in a lab situation in which the tutees were working on a project while being tutored.

3. Attendance - Tutors are expected to meet all scheduled tutorial sessions. In the event of emergency, sickness, etc. which may preclude tutoring or which may cause tardiness, tutor will contact the student or students involved or Tutorial Coordinator at 292-1101, Ext. 267. Each session is scheduled for 1 hour and tutors are expected to insure that each student is tutored for the full time each session.

   Comment: It became necessary to designate an area in which messages could be left for and by the students. I kept a bulletin board for this specific purpose and it insured that a tutor or tutee would not be kept waiting.

   The one hour time limit on tutoring sessions was impossible to keep, Some students would use a half hour before classes to tutor or would tutor longer than one hour if a student was preparing for a test, We, therefore, did not put a time limit on tutoring sessions other than the five hour limit for tutees.

4. Room Assignments - All tutoring will be done in the LRC unless other arrangements are made and approved.

   Comment: All tutoring was done in the LRC except in cases which involved lab work or supervision by an instructor. Example: One Dental student tutored another dental student in the use of instruments in the dental lab. Also tutoring was done in the Learning Lab under the supervision of a Learning Lab Specialist.

5. Reports of Time Tutored - Each tutor will submit a Weekly and Monthly report of hours tutored (time sheets) to Tutorial Coordinator. These time sheets will be utilized for pay purposes. Please note that tutees must initial these forms.

   Comment: After a meeting with many of the student tutors, it was decided to dispense with the weekly and monthly time sheets submitted by the students. Instead, an Individual Time Sheet for each tutor was kept on the Tutorial Coordinator's desk. On this sheet, the tutor puts the date, the name of the tutee, the time-in and the time-out. This sheet is kept all month and at the end of the month is turned in by the Tutorial Coordinator with the Payroll Summary.

6. Pay - Each tutor will be paid $2.50 an hour.

   Comment: At the end of the month, the Individual Time Sheet, the Payroll Summary, W-4 forms for each tutor and Course Approval Forms for each tutor were turned in to the Business Office. They would then mail the checks to the students on the fifteenth of the following month.

A conflict came about concerning Work-Study students or students receiving financial aid. If these students were tutoring, the amount of the money received by them would affect their financial statement in the Financial Aid Office. Therefore, each student involved would have to check with the Financial Aid Office to see if they were eligible for additional funds. If so, they could tutor. If not, they could not tutor. Number of hours that an individual could spend tutoring was also set by the Financial Aid Office.

7. Student Absences - Tutors should report each student absence immediately to the Tutorial Coordinator. Students may be dropped from the program if these absences are frequent.

   Comment: Fortunately, the need did not arise for a tutor or tutee to be dropped. However, the students were well aware of the guidelines.

8. Tutorial Program Evaluation - At the termination of each quarter, each student will be given the opportunity to evaluate the program.

   Comment: An evaluation form was handed out to the tutees. Thirteen students responded to the questions and in all thirteen cases the responses were favorable.

9. Textbooks - Tutors who do not have the appropriate texts for the courses for which they will tutor should notify the Tutorial Coordinator.

   Comment: The Student tutees always seemed to have their textbooks. However, in many cases, the Tutorial Coordinator suggested audiovisual materials or other library sources to the tutor in his tutoring sessions.

10. Length of Quarter - Tutors are expected to tutor each assigned student throughout each quarter and assist them in preparation for final examinations where possible. It is NOT considered appropriate to terminate tutoring prior to the final exam week to concentrate on the tutor's own studies. We expect each tutor to do his utmost to assist each student to learn the subject matter and pass the course. However, the tutor/tutee relationship can be terminated when the student is doing well.

    Comment: In most cases, tutoring relationships were contined throughout the quarter. Tutor assistance was emphasized during final week.

11. Tutorial Coordinator - Each tutor should maintain close contact with the Tutorial Coordinator.

    Comment: Every student kept in close communication with the Tutorial Coordinator and problems were caught early because of this.

12. Tutor Selection - Students who may qualify as a tutor:
    1. Advanced students who are proficient in selected academic subjects and relate well to other students.
    2. Students who are on the Dean's List.
    3. Students must be recommended by an Instructor. (This is mandatory for all tutors.)
    4. Students recommended by a Counselor.

5. Students who received an A or B in the course being tutored.
6. Students who are interested in and have enthusiasm for helping others.
7. Students who have been former tutees, after acceptable level of achievement.

Comment: There were very few students who came in directly and applied to be a tutor. Most of the students were referred by an instructor or a counselor. Also, a letter was sent to all the students on the Dean's List, and many of these students came in to apply. Once they applied, the instructor was contacted for his/her approval if not already given. A list of approved tutors and subjects they could tutor was kept to refer to as tutees came in requesting aid.

13. Tutor Training - It is the responsibility of the tutor to attend training and in-service sessions throughout each quarter to learn, share ideas and review progress of students being tutored. No payment is received for these responsibilities.

Comment: A conference was held with each prospective tutor in which the Tutorial Coordinator discussed procedures, responsibilities, roles, forms, audio-visual equipment, library uses, etc. Two film strips and cassettes from Mt. San Jacinto College in Gilman Hot Springs, California were kept on reserve for use by the tutors. One in-service session was held and many interesting comments were made concerning improvement of instruction (classroom). Success of and suggestions for Tutorial Program were also discussed.

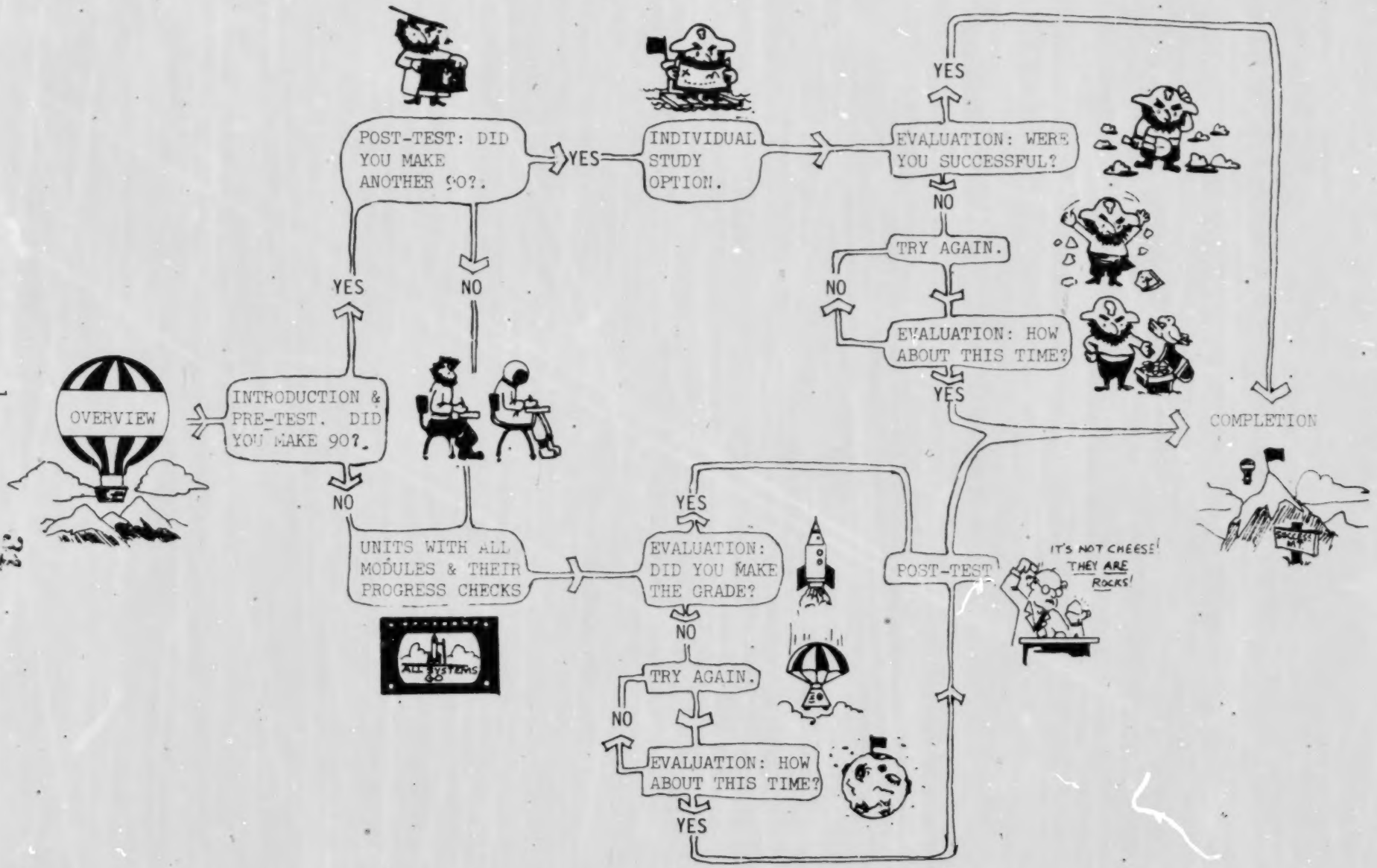
14. Program Publicity - All forms of publicity will be used in order to notify the students of the existence of the Tutorial Program.

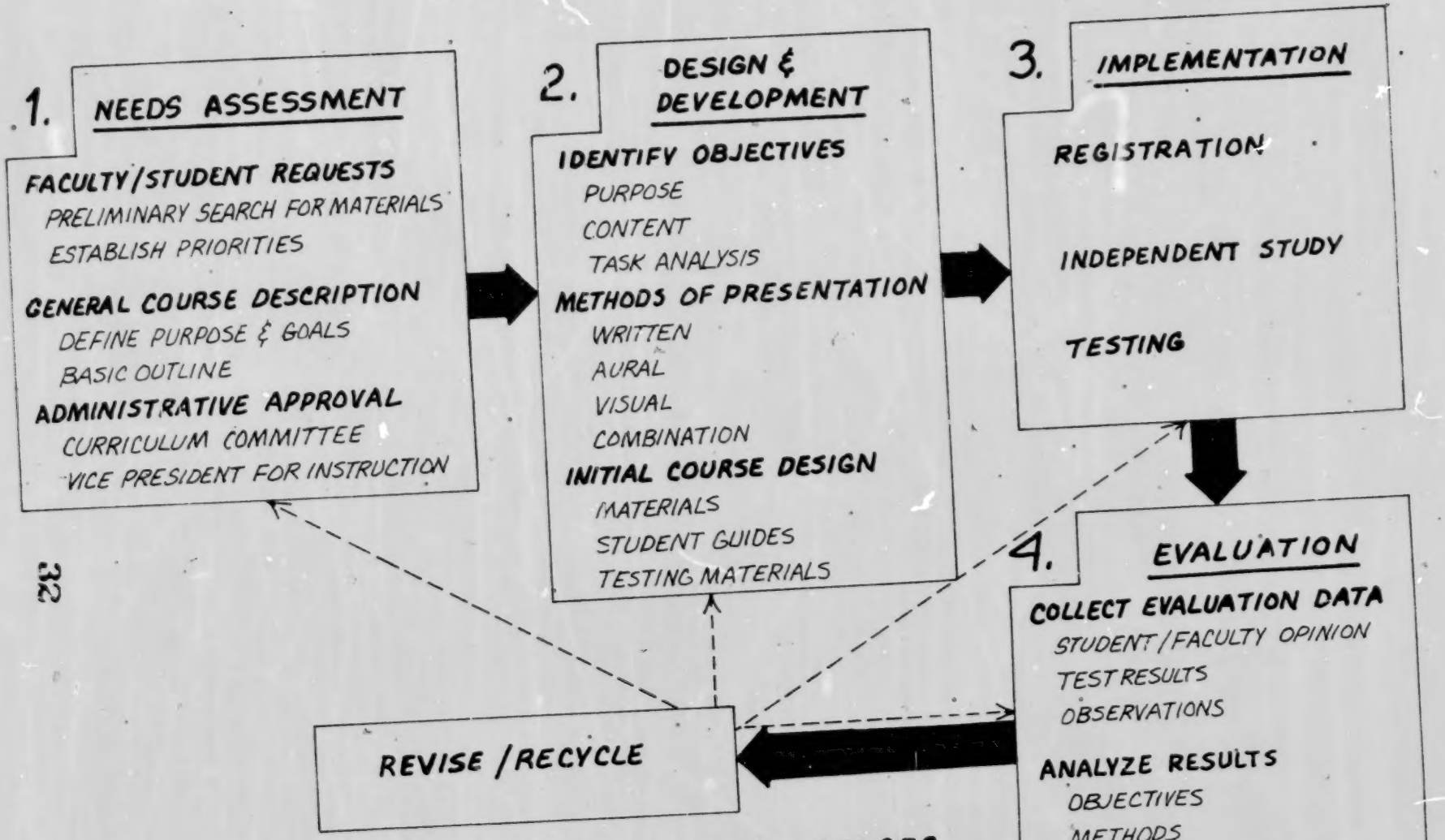
Comment: Types of publicity used were: Tutorial Program Brochure, Tutorial Program Poster, letter to students on academic probation, letter to students on Dean's List, letter to faculty explaining program, article in Tech-Talk (Student's weekly publication), article in Faculty Newspaper. It was found that a constant flow of communication between the faculty and the Tutorial Coordinator was most invaluable. The faculty was kept informed of all Tutor/Tutee combinations (an up-to-date listing was periodically circulated and was kept advised of the progress of the program.

15. Evaluation of Success - No formal evaluation other than student tutee evaluation was undertaken. However, there was an abundance of feedback from the students and the instructors notifying the Tutorial Coordinator of success in the classroom. At the end of the quarter there were 51 Tutors and 72 Tutees. In the quarterly report 297 contact hours were reported. There were two Tutees who dropped out before the quarters' end.

Beverly N. Folks
Tutorial Coordinator

INDEPENDENT STUDY: STUDENT FLOWCHART





INDEPENDENT STUDY: DEVELOPMENTAL STAGES

GTI GUILFORD TECHNICAL INSTITUTE · LEARNING RESOURCE CENTER · 1975

INDEPENDENT STUDY

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MINI-COURSES FOR CREDIT

For those who would like to take credit courses which are flexible enough to work with almost any schedule, GTI is offering several interesting mini-courses. These courses are completely self-instructional, and you can work on them any time the Learning Resource Center is open. The subject matter ranges from sociology to biology. (Check the GTI schedule for listing.) Here are some guidelines for quick and easy enrollment. Follow these and you will have no hassles!

ENROLLMENT

Enrollment is open-entry/open-exit, which means you may enroll in a course any time up to four weeks before the end of a quarter, and drop a course any time up to two weeks before the end. You may register in one of three ways:

1. Register at the beginning of the quarter through regular registration (day or evening) .....or;
2. Register by adding a course on a Drop/Add form, first by having it signed by your advisor, then by Ms. Beverly Folks, (Ms. Kathy Selden at Greensboro Division), and turning it in to the Registrar's office....or;
3. If you are a new student enrolling in the middle of a quarter, you may pick up your applications at the admissions office, see your advisor, then see Ms. Beverly Folks at the LRC, and turn in your forms at the Registrar's office.

After enrollment, come to the Learning Resource Center in order to receive instructions for completion of the course. At that time, you must know exact name and course number of course for which you are registered or be ready to show pink slip from registration. The courses are self-instructional, which means that you work at your own pace with no classroom meetings to attend. Therefore, scheduling is left up to you and your self-discipline.

ATTENDANCE

Since mini-courses are designed to be self-instructional, there are no requirements concerning time schedules or attendance. However, in order to complete your course by the end of the quarter, you should plan to spend two to three hours per week working on it. The only attendance requirement is that if you enroll in a course and then never appear to work on it, or only appear two or three times, you will be dropped from the course.

GRADES

The grade you receive for a mini-course will simply be an average of all the work you have completed at the end of a quarter, whether you have completed all the course work or not. In other words, course requirements left unfinished will unfortunately be averaged in as a zero. Therefore, in order to receive a passing grade, you must complete all course requirements by the end of the quarter. If you have any questions about your grades, or it looks as if you may not be able to finish, please see Ms. Folks.

IT'S UP TO YOU!

LEARNING RESOURCE CENTER

MON.-THURS. 8AM-9PM

FRI. 8AM-5PM

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session

May 3, 1975

Professional Development

Dr. Mimi Vollum is Educational Development Officer at Central Piedmont Community College, Charlotte, N. C. Mimi received her Ed. D from North Carolina State University, and has been at Central Piedmont since 1971, assisting faculty in individualizing instruction and implementing the systems approach. She is active in a number of professional associations and has had extensive consulting experience.

INSTRUCTIONAL DEVELOPMENT

AN ANNOTATED LIST OF NON-PRINT MATERIALS

by Dr. M. Vollum

Kits:

Objectives for instructional programs. (Insgroup, Inc.) An instructional system designed to show how to refine objectives for instructional programs.

Writing objectives for improved instruction. (Career Aids). Gives instruction on how to write behavioral objectives in the cognitive, affective, and psychomotor domains.

Phonotapes: Cassettes:

The means and end of accountability. (ETS)
12 tapes
Presents the theory that a better educational system could be developed by studying means and ends of learning.

Issues involved in accountability. (ETS)
30 minutes
Discusses performance contracting as it relates to accountability. Performance contracting in this instance refers to a school system engaging in an agreement with a private agency for specified goals.

Issues in implementing accountability. (ETS)
30 minutes
From the viewpoint of the company, the relationship between schools and companies where contract for performance is discussed.

Public Expectations (ETS)
30 minutes
Taking the viewpoint of the public, Mr. Riles discusses what the schools are expected to do.

The role of evaluation in accountability. (ETS)
30 minutes
Gives some history of accountability in education and stresses that evaluation should measure the impact of the schools, not just the achievement of the achievement of the student.

The future of accountability. (ETS)
30 minutes
Discusses what may be seen in accountability in the future.

Phonotapes: Cassettes: (Continued)

Issues in implementing accountability. (ETS)
30 minutes
Discusses performance contracting as it was experienced in a public school system in Dallas, Texas.

Public Expectations. (ETS)
30 minutes
A general lecture on the theory of accountability in education.

Non traditional studies: what can America learn from Great Britain. (AAHE)
Discusses the non-traditional type of off-campus learning that Great Britain has been following for years.

Graduate programs: experiments with off-campus learning. (AAHE)
Panel discussion about graduate degree programs with no residency requirements.

Issues in implementing accountability. (ETS)
30 minutes
Discusses performance contracting as it applies to accountability.

The future of accountability. (ETS)
30 minutes
Talks about other concepts of accountability besides performance contracting. Speaks in behalf of parents who want answers about educational resources and their use in learning.

The measurement context: past, present, and future. (ETS)
90 minutes
Contents: 1) Increase in educational opportunity through measurement by Philip DuBois. 2) Today's testing: What do we know how to do? by A. N. Heironymus. 3) Research methodology for educational change by Samuel Messick. 4) Discussion by Jack Merwin.

The educational setting: historical, social, and economic. (ETS)
Contents: 1) Educational opportunity: the context and the reality by John Goodlad. 2) The system-maintenance function of social development in the schools by Robert Hess. 3) Economics and the values of society by Phyllis Wallace. 4) Discussion by Meredith Wilson.

New directions in education: the challenge to measurement. (ETS)
Contents: 1) Exploring selective problems and approaches to early childhood education by Jerome Taylor. 2) Broadening education through vocational and technical training by Kenneth Hoyt. 3) Enriching education through schools without walls by Goodwin Watson. 4) Discussion by Dwight Allen.

Phonotapes: Cassettes: (Continued)

The birth of a non-traditional tradition. (ETS)
Mr. Gould discusses educational change and how the search for old truths is bringing about non-traditional ways to force speedy action.

Implications of the external degree. (AAHE)
Discusses the external degree programs and their application to education both traditionally and as new programs.

Accrediting off-campus learning. (AAHE)
Discusses general accrediting as related to off-campus learning, role of outside accrediting agencies, and problems inherent within an institution when it seeks to extend itself further.

Conversations about off-campus degrees. (AAHE)
Discusses the kind of models of new instructional and degree granting programs.

Credit by examination programs. (AAHE)
Discusses use of CLEP tests in credit by examination programs.

Social responsibilities and the future of higher education. (AAHE)
Talks in general about anguish, the effect of increasingly losing the ability to identify institutionally a scapegoat for our frustrations, and the changing of an industrial society to a convivial society.

Can teaching be evaluated? (AAHE)
Presents two reports about teaching at the college level.
Also includes a question-answer period and a discussion of the two reports.

Requirements for innovation and the management of learning. (SER)
46 minutes
Side 1 discusses the various conditions that must be satisfied for innovation to take place. Includes excerpts from other tapes which discuss problems some educators have had in beginning innovative programs. Side 2 discusses management of learning in an individualized situation.

Instructional objectives, part A. (SER)
50 minutes
A general discussion of the theory and use of instructional objectives.

Instructional objectives, part B. (SER)
50 minutes
Discusses instructional objectives from Mr. Mager's viewpoint.

Phonotapes: Cassettes: (Continued)

Individualized instruction. (SER)
90 minutes
Includes interviews with Dr. Jack Edling of U. S. International University following a tour he made of individualized schools; Warren Smith, project director at the Nova Schools in Ft. Lauderdale, and five students from these schools; and Mrs. Helen Broom, principal of a ghetto school in Harrisburg, Pa. which is using the individually prescribed instruction approach developed at the University of Pittsburgh.

Education mid-century and instructional technology. (SER)
55 minutes
Defines and explains the terms "educational technology" and "systems approach" and explains why this produces quality control. Also discusses the problem of inadequate software and misuse of equipment.

Audiotape cassettes in classroom carrel, part A. (SER)
45 minutes
Describes some of the uses to which audio tapes are being put for instructional purposes, both in group and individual applications.

Curriculum reform.
Discusses reasons for curriculum reform and what is considered curriculum. Also discusses the role of technological innovation.

An interview with Dr. Robert M. Gagne. (SER)
40 minutes
This interview took place on April 8, 1970. Dr. Gagne is concerned with how learning takes place and under what conditions. Also concerned with practical applications of research to learning.

Multi-media learning centers, part A.: dial access systems. (SER)
60 minutes
Gives the results of a tour of dial access systems across the U.S. which Dr. Ofiesh took at the sponsorship of the U.S. Office of Education. He describes the physical layouts and their varied applications.

Multi-media learning centers, part B.: site visits. (SER)
46 minutes
Interviews with people associated with exemplary learning resource centers including Oral Roberts University in Oklahoma.

Designing a school without failure. (SER)
34 minutes
Dr. Glasser talks about why schools fail. On side 2 he discusses the need for relevance and human involvement.

Phonotapes: Cassettes: (Continued)

Dr. Glasser elaborates on ideas taken from the book he authored entitled Schools Without Failure.

Contingency management: interviews with Lloyd Homme and others. (SER)
90 minutes
Describes what contingency management is and how it can be used.
Includes interviews with a psychologist, a teacher, a student, a principal and a sociologist.

Project PLATO (SER)
33 minutes
Discusses the products and consequences of Project PLATO at the University of Illinois. PLATO is PROGRAMMED LOGIC FOR AUTOMATIC TEACHING OPERATION.

Computers as instructors and managers. (SER)
90 minutes
Includes interviews with two staff members of the Stanford Ravenswood School District CAI project, Drs. William Rybinski and Karl Anselm, with Drs. Duncan Hanson and Walter Dick of Florida State University and with Stanley Schwartz of the New York Institute of Technology. They describe various ways in which computers were used in instructional purposes.

Teacher education: teaching, a marriage of art and technology, part A. (SER)
60 minutes
Discusses the characteristics of a good teacher and evaluation of teachers, as well as the state of teacher education. States that teaching in the past was mostly art with little technology to support it and now the trend is toward technology with less emphasis on the art.

Teacher education: teacher training for the 70's, part B. (SER)
60 minutes
Discusses new techniques in teacher training such as role playing, video taping teaching situations, etc.

Performance contracting: the Texarkana Project. (SER)
30 minutes
Describes the experiences of the first school to undergo performance contracting with a private firm.

Student unrest. (SER)
49 minutes
Discusses student unrest and institutional response to this problem. Tries to suggest basic plan of action to maximize harmful effects of the student revolution. Also recounts history of student revolution in universities.

Phonotapes: Reel to Reel:

Objectives and inservice training. (VIMCET)
Ms. Baker examines the practical aspects of employing measurable instructional objectives as a vehicle for staff development. Offers suggestions regarding realistic support mechanisms for objective-based instruction.

The teacher and accountability. (VIMCET)
Professor Robert E. Stake of the University of Illinois focuses on specific roles of the classroom teacher in helping a school be accountable. As one of America's foremost educational evaluators, Dr. Stake's circumspect remarks are particularly relevant for those concerned with educational accountability.

Teaching performance tests and educational accountability. (VIMCET)
This is an address by Professor Popham to a group of administrators, teachers, and educational researchers regarding the use of teaching performance tests in implementing various schemes of educational accountability. Recorded live, the address incorporates a series of practical suggestions for using such assessment procedures.

Criterion - referenced instruction. (VIMCET)
Professor W. James Popham talks to his class about a systems approach and how educators can make better instructional decisions using a strategy which increases precision. This 42-minute tape combines humor and persuasion to encourage educators to focus on outcomes.

Adapting to student differences. (VIMCET)
One of the nation's leading instructional psychologists, Professor Robert Glaser of the University of Pittsburgh, presents his views regarding how instructors can adapt their efforts to individual differences among learners. As the chief architect of Individually Prescribed Instruction and former president of the American Educational Research Association, Dr. Glaser's views on this topic are particularly insightful.

Sound Filmstrips:

Evaluation. (VIMCET)
This program treats a topic of great interest to all involved in instruction, discussing a rigorous system for assessment of teaching. Test construction, item sampling, and interpretation of student performance data are given attention and the critical role of pre-assessment of learner competency is emphasized. The viewer learns to select and construct test items appropriate to given objectives, to design both formal and informal pre-assessment procedures, and to make appropriate inferences regarding instruction based on data obtained from his students.

Sound Filmstrips (Continued):

Establishing performance standards. (VIMCET)
This program describes concrete ways of judging the adequacy of student accomplishment. Both qualitative and quantitative techniques for assessing learner competence are illustrated, including intellectual, attitudinal, and psychomotor behavior changes. The viewer is taught (1) to distinguish between performance standards used to differentiate achievement of students and those which aid the teacher in judging his own performance and (2) to construct performance standards for objectives in a number of subject fields.

Analyzing learning outcomes. (VIMCET)
In this program techniques of task analysis are applied to learning objectives. Practice is provided so that an operational objective can be analyzed into subtasks, designated as either entry or enroute skills. Use of a particular strategy is advocated in which instruction is approached in terms of learners' response rather than teacher presentations.

Identifying affective objectives. (VIMCET)
Perhaps the most difficult tasks of those who must formulate objectives is the generation of non-cognitive, that is, affective, objectives. This program provides a four-step strategy for designing affective objectives and gives the viewer practice in using the strategy.

Appropriate practice. (VIMCET)
One of the most important principles which can be used in selecting effective instructional sequences is to "give the learner opportunities to practice the behavior implied by the instructional objective." This program examines two forms of appropriate practice, namely, equivalent and analagous practice, and contrasts these with prerequisite tasks and irrelevant behavior. The viewer learns to identify each of these and to generate his own appropriate practice activities.

Promoting perceived purpose. (VIMCET)
This program deals with motivation or, more precisely, the necessity of having learners perceive the worth of what they are studying. Four different methods of promoting a suitable "learning set" are treated, i.e., by deduction, induction, exhortation, and extrinsic rewards. The viewer learns (1) to identify these four procedures for promoting perceived purpose and (2) to develop instructional activities incorporating each procedure. An effective "surprise" ending which concludes the program dramatizes the importance of this principle.

Educational objectives; an instructional program. (VIMCET)
This program assists one in developing precisely stated instructional goals. At its conclusion viewers are able (1) to distinguish between behaviorally and non-behaviorally stated objectives and (2) convert non-behavioral objectives to a form specifying student post-instruction behavior.

Sound Filmstrips (Continued):

Selecting appropriate educational objectives. (VIMCET)
What objectives should a teacher attempt to achieve? This program provides several tools with which to answer this question. Demonstrating that mere specificity of instructional goals does not insure worthwhile goals, the program develops the viewer's skills in using modified versions of the Taxonomies of Educational Objectives.

Knowledge of results. (VIMCET)
This program stresses the importance of allowing the learner to judge the adequacy of all important responses made during an instructional sequence. The viewer is given practice in which an instructor does or does not provide knowledge of results.

The teaching of reading. (VIMCET)
This program describes an empirial model applied to the improvement of reading instruction. The viewer learns to describe the model and to identify examples of reading objectives and activities which illustrate the use of this approach. Practice is provided in writing test items which measure reading skills.

Writing tests which measure objectives. (VIMCET)
Because standardized measures are often not appropriate for objective-based instruction, the use of the "item form" approach to writing testing situations is described. Practice is given in transforming objectives into this format and producing items which match objectives.

Defining content for objectives. (VIMCET)
In this program the application of behavior objectives is made feasible in an ordinary classroom situation. Teachers are taught that operational objectives should specify content that is generalizable beyond a single test item. The viewer learns to identify objectives which do and do not exemplify content generality and to write objectives which do.

Instructional tactics for affective goals. (VIMCET)
Operating on the assumption that affective instructional goals are perhaps the most important which classroom teachers can accomplish, this program describes the general nature of three instructional tactics which are particularly useful for promoting the attainment of affective goals. Specifically, the viewer is presented with the following three tactics: modeling, contiguity, and reinforcement, and given practice in identifying when they are being employed by fictitious teachers.

Alternative measurement tactics for educational evaluation. (VIMCET)
This program presents a four category conceptual system for describing and generating the diverse types of educational measurement schemes which should be used in systematic educational evaluations.

Sound Filmstrips (Continued):

Alternative avenues to educational accountability. (VIMCET)
This program examines an evaluation theme of considerable current popularity, namely, educational accountability. This program distinguishes between three forms of such accountability, namely, "personal," "professional," and "public." Advantages and disadvantages of each of these three educational accountability systems are treated.

Motion Pictures:

This is Marshall McLuhan, pts. 1 and 2 (MCGRAW HILL)
54 minutes col.
Investigates the central ideas of Marshall McLuhan using pictorial techniques and including his own comments. Examines the reaction of others to his views and points out that his interest is the impact of electronic technology on the contemporary world.

New dimensions through teaching films. (CORONET)
27 min. b&w
Examines the role of educational films as an integral part of the curriculum. Excerpts from more than sixty films show the uses of film at different grade levels and with different subjects.

Education in America: the nineteenth century. (CORONET)
16 min. col.
Discusses the development of free public school systems from the time of the Northwest Ordinance until 1900, including the westward movement, the change to secular education, the rise and decline of the district school, the struggle for tax support and state control, compulsary attendance laws, and the rise of teacher-training institutions. Describes the influence of American textbooks, the effect of the Civil War on education, and the contributions of Daniel Webster, William McGuffey, Gideon Hawley, and Horace Mann.

Education in America: twentieth century developments. (CORONET)
16 min. col.
Studies the effects of the industrial revolution on education in America; the influences of Herbart, Binet, Dewey, Thorndike, and others; the appearance of the junior high school and graduate education; the building of central consolidated schools; federal aid to education during the depression years; the G.I. Bill of Rights; and Supreme Court decisions affecting education.

Goofing off with objectives. (MAGER ASSOC.)
15 min. col.
A light-hearted dialogue between Mager and Rahmlow wherein Rahmlow tries to teach Mager about ways in which objectives can be misused.

Motion Pictures(Continued):

Instructional development. (INDIANA UNIV. AV CENTER)
17 min. b&w
Presents to the educator a systematic approach to instruction based on decisions about the learner, learning, evaluation, and the learning environment, using the subjects of tennis and music as examples.

Behavior modification in the classroom. (U.S. OFFICE OF EDUC.)
24 min. b&w
Demonstrates the use of positive reinforcement techniques to modify the behavior of elementary students or classes whose performance suffers because of their distracting behavior of daydreaming.

My name is Children, pts. 1 and 2 (NET)
60 min. b&w
Presents scenes of children and teachers in a school that uses an inquiry approach to motivate its students. Shows children working alone and in various sized groups, and pictures teachers coordinating their plans and discussing individual student problems in daily meetings. Filmed at Nova Elementary School, Ft. Lauderdale, Florida.

Resources for learning. (McGRAW HILL)
Shows the range of both traditional and new educational media available to schools and the implications of their use for improvements in education.

Resources for language teaching. (McGRAW HILL)
Discusses the theory of learning behind the language lab and discusses the equipment and materials needed for the laboratory situation.

Learning through programmed instruction. (McGRAW HILL)
A discussion of Dr. B. F. Skinner's role in developing the procedure of programmed instruction and the basic structure of the programmed frame. Explains the various styles of programming and the methods used to present the program. There is also a brief consideration of the role of the computer in instruction.

Learning through television. (McGRAW HILL)
Illustrates that television can mean many things in education, and can be used in many forms for different purposes.

Learning. (CRM)
Shows experiments in learning. B. F. Skinner and Richard Malott deal with operant conditioning. Nathan Azrin demonstrates aversive conditioning. Jack Hailman deals with sign-stimuli, and G. P. Baerends demonstrates supernormal conditioning. Explains the work of David McClelland on motivation learning and the work of Lewis Lipsitt on infant learning.

Motion Pictures (Continued):

Learning and behavior - the teaching machine. (CAROUSEL)
29 min.
Presents Drs. B. F. Skinner and R. J. Hernstein who demonstrate how to measure the learning and conditioning process in the laboratory and show that all learning is dependent upon reward. The work of Dr. Ivan Pavlov, 1904 Nobel Prize winner, is also discussed.

Sound Slide Sets:

Appropriate practice. (VIMCET)
Examines two forms of appropriate practice, namely, equivalent and analogous practice, and contrasts these with prerequisite tasks and irrelevant behavior. The viewer learns to identify each of these and to generate his own appropriate practice activities.

ADDRESSES

AAHE
American Association for Higher Education
1 Dupont Circle, NW, Suite 780
Washington, D.C. 20036

Career Aids, Inc.
299 North Central Avenue
Glendale, Calif. 81203

ETS
Educational Testing Service
Rosedale Road
Princeton, N. J. 08540

INSGROUP
Instructional System Group
5855 Naples Plaza, Suite 204
Long Beach, Calif. 90803

SER
Sound Education, Inc.
P.O. Box 10245
Palo Alto, Calif. 94303

VIMCET Associates, Inc.
P.O. Box 24714
Los Angeles, Calif. 80024

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session

May 3, 1975

Instructional Development: A Team Approach

Dr. Jo Anne Craig received her doctorate from Florida State University shortly after the CCAIT Conference. The title of her dissertation is:

"An assessment of the effectiveness of developmental education programs in selected urban community colleges in the Commonwealth of Virginia."

INSTRUCTIONAL DEVELOPMENT: A TEAM APPROACH

Dr. Jo Anne Craig

Hello, I am Jo Anne Craig, an administrative intern at the Alexandria Campus of Northern Virginia Community College. As a part of the Campus let me welcome you again. I hope you will have an opportunity to tour our facilities and view the style chosen to combine form and function. One of the first impressions most visitors have is of the extensive use of open space.

The quality of openness extends far beyond the physical facilities. It generates communication, involvement, and a team approach. I have been asked today to discuss that team approach as it applies to instructional development.

There are two concepts implied in the title of our discussion. First, team approaches, and second, instructional development.

A team approach recognizes that Joe Namath cannot be a superstar unless someone is receiving his passes and nine others are insuring that all the loopholes are covered. Team management in the college works the same way. The days of one omnipotent authority have passed. Whether the decisions are administrative or instructional, the combined efforts of several individuals produce a greater effect. Two heads are better than one, and if two are better, why not four or five? One word of caution, teams should not be confused with committees.

Where and how are teams used? They should be used at all centers of decision making. Teams should have the ability to respond to changing events, to tolerate conflict, to look at long-range and campus goals, and to consider the team efforts more important than individual efforts. But most important is the establishment of and commitment to a common goal.

The common goal we are concerned with today is instructional development. Instructional development is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives to bring about more effective instruction. Instructional development, is therefore, the responsibility of everyone, in one way or another because learning experiences provide the raison d'etre for this or any other educational institution.

Responding to this charge, a group of managerial faculty at Alexandria began working on a system to organize and support instructional development activities. As most of us are discovering, there needs to be a path through the maze of computer-assisted instruction, modular units, team teaching, audio-visual supports, cognitive mapping, and whatever other terms we apply to instructional styles. The Division Chairmen responsible for the system I am discussing today worked long hours to produce the model. The following Campus needs were identified:

1. need for subject area groupings

2. need for the development of more kinds of offerings through TICCIT than English and math

3. need for consideration of supports such as LRC and definition of faculty workloads

4. need for wider participation in development projects

An Instructional Development team was formed for each project. This was to make the best possible use of resources and faculty involvement. Minimum membership on the Development team would include:

1. subject matter faculty in an instructional division

2. Division Chairperson or designee

3. Coordinator of the Learning Laboratory or alternate

Usually the instructional faculty member assumes the responsibility for the direction of the project. We have encouraged more faculty members to participate on the team to ensure the product's being used by more than one individual and that the product will supplement other instructional styles. With institutional investment, we wanted to both assure the freedom of the instructor and avoid personalized products which are lost when a particular faculty member leaves the College.

The involvement of the Division Chairperson or designee accomplishes two objectives: divisional support and a managerial liaison. The Division Chairperson can authorize expenditures, be an information source, or arrange for adjusted workloads.

Instructional development projects are great. But they are not implemented in isolation. The input of an individual from the Learning Resource Center can determine if the Campus has the facilities required, can obtain material and technical assistance, and offer suggestions for strengthening the project.

Two teams are involved in the development of the project. The second team is the Review team. The principle function of the Review team is to assure quality control. The Review team follows a pre-established schedule of review to ascertain that the project is moving on time and maintaining its goals at a satisfactory level. Team members have equal vote, and decisions are determined by a simple majority vote. To insure leadership, campus-wide breadth, and division faculty assessment, the Review team consists of:

1. Division Chairperson or designee
2. member of the campus faculty or staff, specifically from outside the division from which the project emanates
3. faculty member from the instructional division involved

The selection of the Review team is to achieve balance.

The Division Chairperson obviously does not serve on both teams. He, or she as it may be, serves on the particular team to which he feels he can contribute the most.

The "outside" faculty member is chosen to review the project because of his objectivity--or hoped for objectivity--to the discipline and the teaching style.

The faculty member from within the Division is chosen to offer suggestions for improving the project from the standpoint of a member of the academic discipline and awareness of the Divisional interests.

Some of the discussion on team membership will become more relevant as I go through the system with you and detail how it has worked for the Alexandria Campus.

We have not yet used an official acceptance date for proposals. As the volume of proposals increases, the use of a cut-off date may be required. Proposals should be submitted, however, with sufficient advance to the quarter of implementation for the adjustments of workloads.

Components 2, 3, and 4 indicate the degree of brainstorming necessary to move an idea to the proposal stage. Please note that each component of the system stresses participation by more than just one faculty member. Proposals are more acceptable when they include responses to the following suggestions:

1. a general background statement on the need for the project
2. The objectives of the proposal:
   How will this project benefit the student?
   How will this project benefit the instructional division?
   How will this project benefit the Campus/College?
3. Outline the development procedures
4. Suggest a Development and Review team membership
5. Allow adequate time for the completion of the project and state a commitment to the completion of the project

6. Request appropriate amount of released time from teaching duties for project development

7. Identify costs of materials and other related costs
   Will these funds and/or costs be absorbed by the instructional division or must more funds be allocated?

8. Identify the coordination with support services for the project

9. Familiarize the teams with the Instructional Development system to ensure appropriate development and review team actions

Components 7 through 11 reflect major decision points. Obviously, many decisions about content and design have been reached previously. The final decision of Campus commitment is reached in a weekly managerial meeting. Participants include the instructional division chairpersons, the directors of Continuing Education and the Learning Resource Center, the Dean for Student Development, the Campus Business manager, a member of the Provost's support faculty, and the Provost. The question before the group is, "Will the project produce the desired benefits to the Campus?"

Any changes in team membership are also made at this point.

And so we reach the "Ready, set, go" stage.

Stage II of the system packs in a lot of activity. The development process begins with a meeting of the Development team to review the project, define the system, establish a timetable, and qualify standards. This is coordinated

with the Review team. Recommendations are made to the Provost and, with his approval, the project goes ahead.

It would be a little redundant since you have the flow chart, to go through each point. At each review point, the Review team can recommend continuance, modification, or termination of the project.

We have listed several suggestions which can guide the development of a project. They include:

1. Define general course concepts, unit objectives
2. Identify units which represent basic course content
3. Develop unit objectives in terms of performance or competency levels.

   Consider such things as:

   --the need to know (the core of course material or the universal, basic concepts of the course)

4. Describe the specific learning strategies for each unit. Consider such things as :

   --various modes of learning
   --various modes of presentation
   --various types of non-classroom instruction
   --instructional materials and support services

5. Design performance measures for each learning objective. Consider such things as:

   --rote level
   --understanding level
   --application level

6. Evaluate the project and decide if it is to be:

   --employed as is

   --revised

   --discarded

This system has worked very well this year. Projects completed include self-instructional support units in drawing, a modular literature course, and self-paced units in biology. Projects "in the works" now include a study of the automotive program, a computer-oriented calculus course, supplementary material development in a math series, a Medial Laboratory program built around the TICCIT system, a video-taped series of debates and discussions in sociology, and an ancillary reading program.

There is always the charge that such a highly defined system lacks flexibility. The system before you is flexible. It has several points of brainstorming, modification, or termination. One project was approved conditionally by the Provost. After three weeks of development the Review team recommended the project's continuance with slight modification.

Model for Instructional Development

Alexandria Campus
NVCC

Instructional development is defined as a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives to bring about more effective instruction.

The following plan is a prototype model for systematic utilization of campus resources in the production of instructional development projects. The system is one in which proposals originate in the subject areas through faculty in concert with Division Chairmen. Initial priorities are set in the divisions and Campus priorities are set by the Provost after discussion with the Division Chairmen. Projects, once selected, are to be developed through a development team whose progress is systematically monitored by a review team.

Development Team

At the point where the Provost and Division Chairmen have decided upon a particular proposal for development, that body will assign a development team. The exact makeup of the team will depend on the nature of the project, but will include:

1. Subject area faculty
2. Division Chairman or designee
3. Coordinator of the Learning Laboratory or appointed alternate

Review Team

The principle function of the review team is to assure quality control. The review team will follow a pre-established schedule of review to ascertain that the project that the project is moving on time and maintaining its goals at a satisfactory level. Team members will have

equal vote, and decisions will be determined by simple majority vote.

To insure leadership, a campus-wide breadth, and division faculty assessment, the team will consist of:

1. Division Chairman or designee
2. A member of the campus faculty and staff, specifically from outside the division from which the project emanates
3. A faculty member from the Division involved

SUGGESTIONS FOR INSTRUCTIONAL DEVELOPMENT

1. Define the general course objectives

2. Identify units which represent the basic course content

3. Develop unit objectives in terms of performance levels. Consider such things as:

    a. the need to know--the core of course material or the universal, basic concepts of the course

    b. the nice to know--or the unique experiences or concepts which may enhance the core material

4. Describe the specific learning strategies for each unit. Consider such things as:

    a. various modes of learning

    b. various modes of presentation

    c. various types of non-classroom instruction

    d. instructional materials and support services

5. Design performance measures for each learning objective. Consider such things as:

    a. rote level

    b. understanding level

    c. application level

6. Evaluate the project and decide if it is to be:

    a. employed as is

    b. revised

    c. discarded

SUGGESTIONS FOR INSTRUCTIONAL DEVELOPMENT PROPOSALS

1. Give a general background statement

2. Clarify the objectives of the proposal

   How will this project benefit the student?
   How will this project benefit the instructional division?
   How will this project benefit the Campus?

3. Outline the development procedures

4. Suggest Development and Review Team memberships

5. Allow adequate time for the completion of the project and state a commitment to the completion of the project

6. Request the appropriate amount of released teaching time for project development

7. Identify costs of the materials and other related costs

   Will these be absorbed by the instructional division or are more funds to be allocated?

8. Identify the coordination with support services for the project

9. Familiarize the teams with the Instructional Development System to ensure appropriate development actions

Figure A

Alexandria Campus
NVCC

IMPLEMENTATION PLAN FOR INSTRUCTIONAL DEVELOPMENT
STAGE I - Proposal Selection

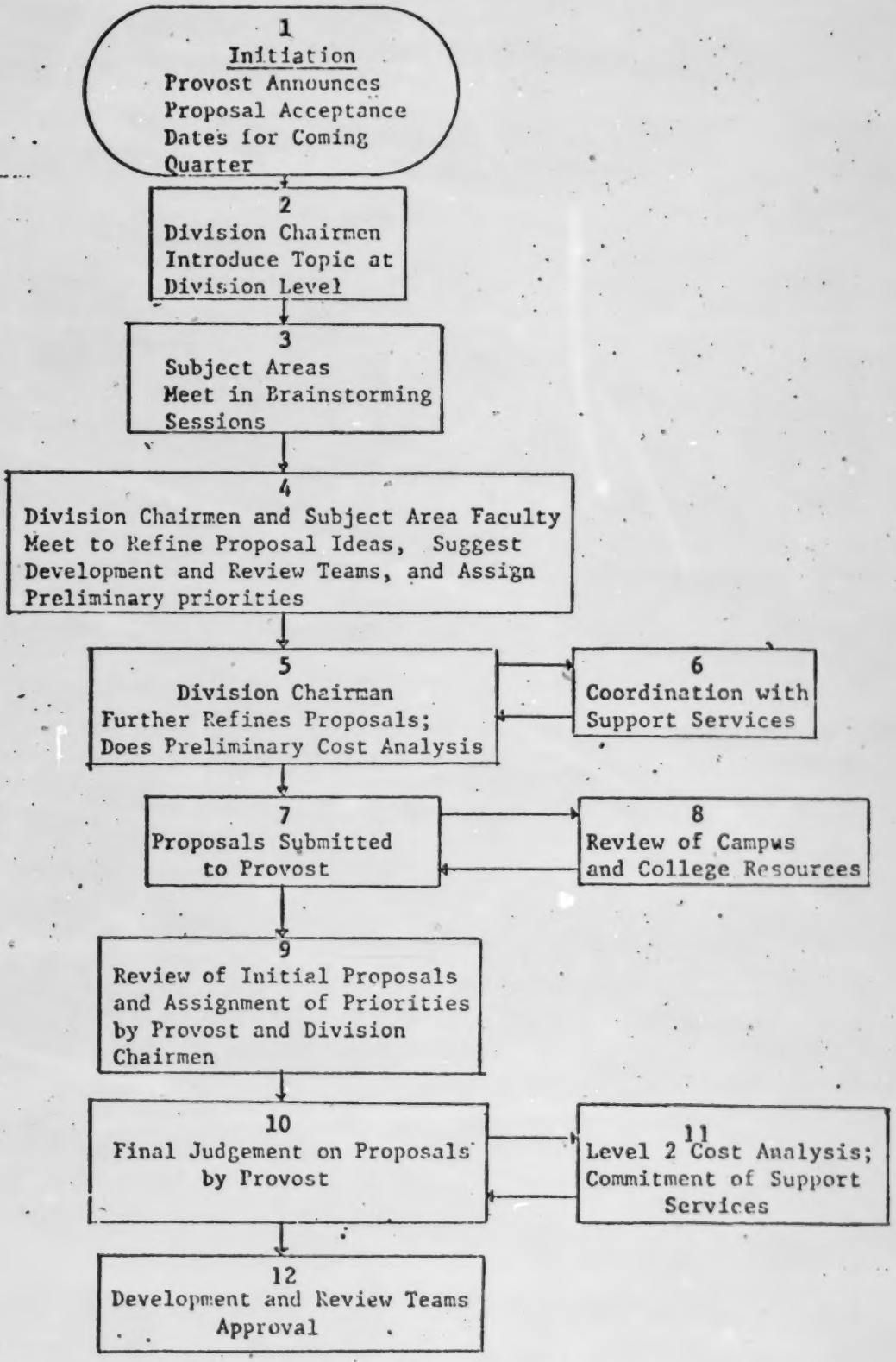
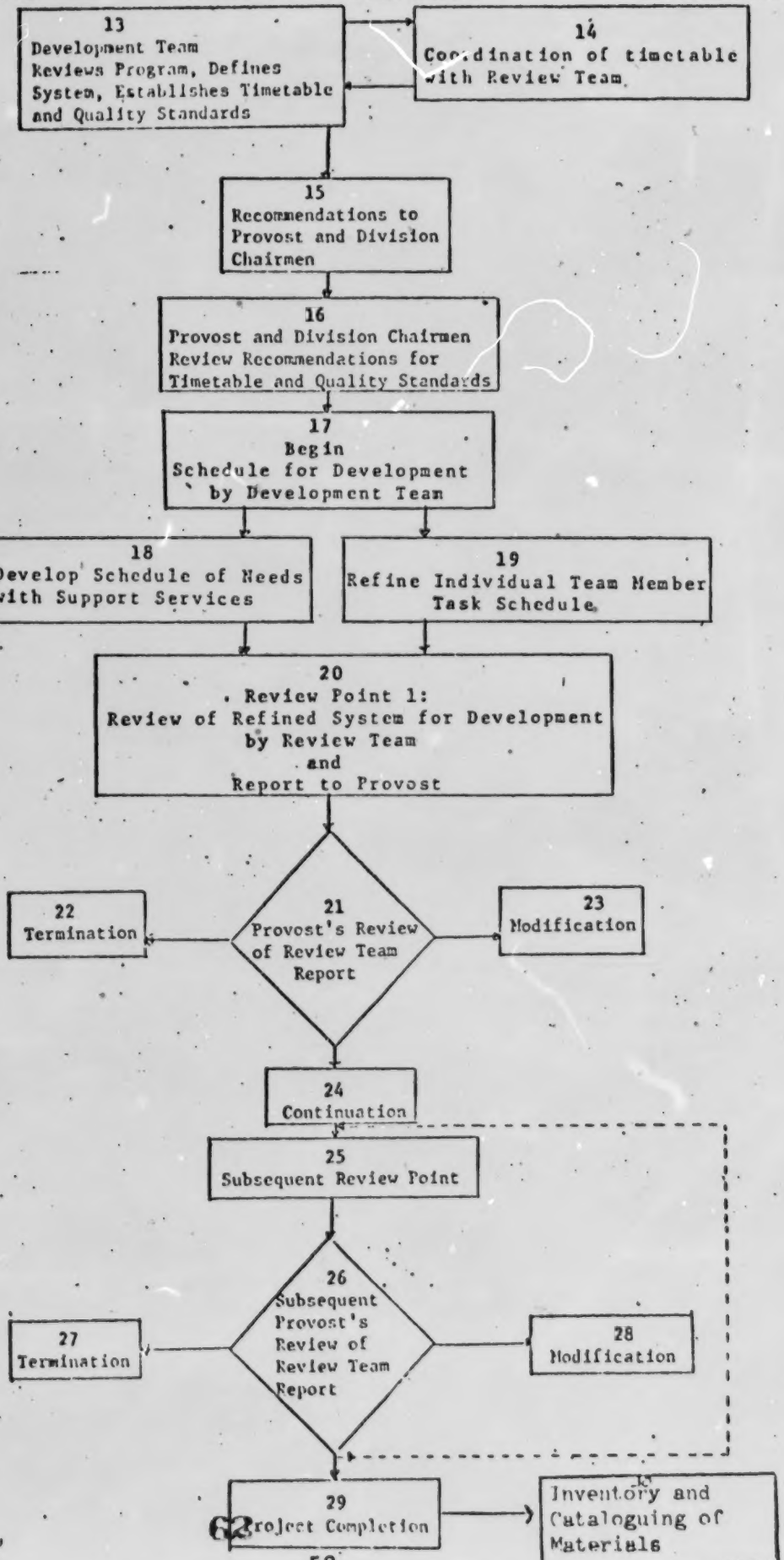

1
Initiation
Provost Announces Proposal Acceptance Dates for Coming Quarter
2
Division Chairmen Introduce Topic at Division Level
3
Subject Areas Meet in Brainstorming Sessions
4
Division Chairmen and Subject Area Faculty Meet to Refine Proposal Ideas, Suggest Development and Review Teams, and Assign Preliminary priorities
5
Division Chairman Further Refines Proposals; Does Preliminary Cost Analysis
6
Coordination with Support Services
7
Proposals Submitted to Provost
8
Review of Campus and College Resources
9
Review of Initial Proposals and Assignment of Priorities by Provost and Division Chairmen
10
Final Judgement on Proposals by Provost
11
Level 2 Cost Analysis; Commitment of Support Services
12
Development and Review Teams Approval

Figure B INSTRUCTIONAL SYSTEM DESIGN Alexandria Campus, NVCC



COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session

May 3, 1975

Competency-Base Instruction

The attached handout, "Communications With Outside Agencies," was distributed to participants of this session. The handout illustrates the instructional format utilized at NVCC - Woodbridge Campus. Learning objectives and learning experiences are specified, and sample evaluation questions are provided.

A slide/tape presentation was the primary learning experience provided to assist participants in meeting the stated objectives.

Although the slide/tape presentation cannot be included here, additional information may be obtained by writing:

Dr. Gordon M. Cook
Director of Learning Resources
Northern Virginia Community College -
Woodbridge Campus
Smoketown Road
Woodbridge, Virginia 22191

Gordon Cook received his doctorate from the University of Maryland. Prior to coming to NVCC, he was Designer-Facilitator for competency - based learning at Alverno College, Milwaukee, Wisconsin, and served for a year as Assistant Director of performance-based teacher education for the American Association of Colleges for Teacher Education.

COMMUNITY COLLEGE ASSOCIATION

FOR INSTRUCTIONAL TECHNOLOGY

COMPETENCY-BASE INSTRUCTION

Concurrent Session
May 3, 1975

The attached handout, "Communications With Outside Agencies," was distributed to participants of this session. The handout illustrates the instructional format utilized at NVCC - Woodbridge Campus. Learning objectives and learning experiences are specified, and sample evaluation questions are provided.

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Dr. Gordon M. Cook
Director of Learning Resources
Northern Virginia Community College -
Woodbridge
Smoketown Road
Woodbridge, Virginia 22191

Dr. Gordon M. Cook
NVCC-Woodbridge

TITLE: COMMUNICATIONS WITH OUTSIDE AGENCIES

RATIONALE: As a state institution and a community college, Woodbridge Campus has a responsibility to apprise the community of its activities. As a group of professionals, Woodbridge has an obligation to share its programs and ideas with interested colleagues.

"COURSE" OBJECTIVE: As a result of this series of communications, both lay and professional people within the college community will understand what Woodbridge Campus is attempting to do in order to effectively meet student needs.

UNIT OBJECTIVE: Professionals will understand (a) the meaning and implications of competency-based instruction and (b) two different approaches to developing and implementing CBI.

CONDITIONS FOR EVALUATION: At the end of the session, participants will be asked to write an essay within a two-hour time frame in which they demonstrate understanding of the learning objectives.

Learning Objectives	Learning Experiences
MODULE FOR CONCEPT #1	
1. Define Competency-Based Instruction.	1.1 Take notes and ask questions during presentation.
	1.2 Review slide/tape of presentation.
	1.3 Read "A New Alphabet for Higher Education," News of Higher Education in the South, Sept., 1974.
2. List three reasons why CBI is "an idea whose time has come."	2.1 See 1.1 and 1.2.
3. State that CBI demands analysis of instruction.	3.1 See 1.1 and 1.2.
4. State the significance of Tyler's study for CBI.	4.1 See 1.1 and 1.2.
	4.2 Read Tyler, R.W., "Permanance of Learning." Journal of Higher Education, 1933, 4, 203-205, (E).
* 5. Explain what CBI is and outline its potential.	5.1 See 1.1 through 4.2.

MODULE FOR CONCEPT #2

6.	Define Competence Based Learning (CBL).	6.1 Take notes and ask questions during presentation.
		6.2 Review slide/tape of presentation.
		6.3 Read "CBL at Alverno College" published by Alverno College.
7.	List the 8 competencies.	7.1 See 6.1 and 6.2.
		7.2 Read "Specifications of Developmental Levels, Competences 1-8" published by Alverno College.
8.	State the number of hierarchical or developmental levels in each competence.	8.1 See 6.1 and 6.2.
9.	State requirements at Levels 1-4.	9.1 See 6.1 and 6.2.
10.	State requirements at Levels 5-6.	10.1 See 6.1 and 6.2.
11.	State how external classroom assessment operates.	11.1 See 6.1 and 6.2.
		11.2 Read "Competence Assessment Program, Manual for Level 1," published by Alverno College, (E).
12.	Define Instructional Module.	12.1 See 6.1 and 6.2.
		12.2 Review one or more of the Alverno College Instructional Modules, (E).
13.	State the function of instructional modules.	13.1 See 6.1 and 6.2.
14.	Define Learning Experiences.	14.1 See 6.1 and 6.2.
15.	State the major implication of CBL on classroom instruction.	15.1 See 6.1 and 6.2.
16.	State the direction CBL is taking at Levels 5 and 6.	16.1 See 6.1 and 6.2.
* 17.	Explain how CBI functions in one liberal arts college (Alverno).	17.1 See 6.1 through 16.1.

MODULE FOR CONCEPT #3

18. Define an approach to CBI involving the identification of overall program competencies.	18.1 Take notes and ask questions during presentation. 18.2 Review slide/tape of presentation.
19. Define an approach to CBI involving a course by course conversion.	19.1 See 18.1 and 18.2 19.2 Read "Designing Instructional Systems for Performance-Based Programs," by W. Robert Houston, (E).
20. List the characteristics of the following elements of the CBI Program at Woodbridge Campus: (a) instructional format (b) learning objectives (c) learning experiences (d) evaluative criteria (e) self-paced option (f) future development	20.1 See 18.1 and 18.2. 20.2 Read "A Description of a Strategy for Implementing a Systems Approach to Instruction on a Campus-Wide Basis," by Floyd S. Elkins, (E).
* 21. Explain and compare the two alternative approaches to developing CBI in a community college.	21.1 See 18.1 through 20.1.
** 22. Write an essay in which you develop a model for implementing CBI at your institution.	22.1 See 18.1 through 21.1.

MODULE FOR CONCEPT #1

SELF-CHECK QUIZ

1. Which of the following is <u>not</u> true in regards to Competency-Based Instruction:

   (a) Students know the learning objectives.

   (b) The conditions and criteria for demonstrating competency is known.

   (c) CBI is a new idea.

   (d) To demonstrate competency, students need only meet published criteria and conditions.

   (e) None of the above.

2. Fill in the following blanks:

   CBI is an idea whose time has come. _____ demand an accountability that CBI can insure. The _____ which can provide the flexible time frame inherent in educating for competency is readily available. _____ demand for meaningful learning attuned to their own needs and learning styles can be met in CBI.

3. One of the most significant advantages of CBI is that:

   (a) It gives teachers more free time to think and write.

   (b) Students do not have to see their teacher but once a quarter.

   (c) It can be used in one-room schools.

   (d) It demands continuous analysis of instructional goals.

   (e) Both b and c.

4. In regard to Tyler's study on forgetting, which of the following are true (+) and which are false (-):

   ____ (a) Student ability to interpret new experiments decreased.

   ____ (b) Student ability to apply principles to new situations <u>remained about the same</u>.

___ (c) Many facts and technical terms were forgotten.

____ (d) The importance of teaching concepts rather than facts is underscored.

5. When you return to your campus next week, assume someone stops you in a corridor and, in reference to this session you attended, asks you what CBI is and what is its potential. Write a "90 second explanation".

ANSWERS

1. c
2. Legislators, AV equipment, Student
3. d
4. (a) False
   (b) True
   (c) True
   (d) True
5. Your answer should include elements of 1-4 above and the implications of these (i.e., we must structure our teaching-learning environment to the purpose of developing within our students' skills and behaviors, which they can take with them and build upon after college.

SAMPLE TEST

COMPETENCY-BASED INSTRUCTION

1. You have just been appointed the Instructional Development Officer on your campus. The academic dean, who is interested in developing and implementing competency-based instruction on the campus, has asked you to prepare a paper on CBI and approaches to implementing CBI.

   Using the data given in the presentation, outline your paper by: defining CBI, discussing two approaches to developing CBI, recommending the best approach or combination of approaches to developing CBI on your campus and justifying your recommendations.

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session

May 3, 1975

Extended Learning Institute

Dr. Hyman Field is Director of Extended Learning Institute, Northern Virginia Community College, 8333 Little River Turnpike, Annandale, Virginia 22003.

The Extended Learning Institute of Northern Virginia Community College offered its first classes in January 1975, representing " a new concept in higher education designed to provide learning opportunities to those not able to take advantage of the more traditional classroom based courses at one of the five campuses".

WHAT IS EXTENDED LEARNING

The Extended Learning Institute of the Northern Virginia Community College represents a new concept in higher education designed to provide learning opportunities to those who may not be able to take advantage of the more traditional classroom based courses at one of the five campuses.

NORTHERN VIRGINIA COMMUNITY COLLEGE

Who Can Participate?

Anyone. Particularly those who are desirous of obtaining college credit but find it difficult to attend classes in the regular campus-based learning programs. Non-credit courses are also available.

What is Available Now?

Data Processing — "Making It Count" (DAPR 106)
Music — Pop Music U.S.A. (MUSC 198)
Principles of Economics (ECON 211, 212, 213)
Math — Developmental Math (MATH 01)
Consumer Course — "Deflating the High Cost of Living"
(See course descriptions inside this brochure)

When Do Courses Start?

Extended Learning Institute courses will begin in early January 1975. Specific information can be obtained by mailing the information form or calling 323-3379/3347.

How Do I Register?

If you are currently a student at NVCC, simply fill out the attached card and return it with a check or money order for tuition.

If you have not made application to the College or have not taken a course with NVCC for one year, simply request application and registration information by checking the appropriate box.

In both cases, by return mail, you are on your way to extended learning

How Much Does It Cost?

Application fee $5.00 (for those applying to NVCC for the first time)

Tuition for Credit Courses

For Virginia Residents:
$6.25 per credit for those taking up to 12 credits
$75.00 for those taking 12 or more credits

For Out-of-State Residents:
$21 per credit for those taking up to 12 credits
$250 for students taking 12 or more credits

Fees for non-credit courses vary according to the costs of the course, but are kept to a minimum.

DAPR 106 - Principles of Data Processing (3 credits)

Television — Starts January 13, 1975
Tuition — $18.75 for Virginia Residents
(Out-of-State is $63)

This television-based course, "Making It Count," is designed as a broad introduction to data processing. Its purpose is to provide anyone with a basic understanding of the principles of computing. Managers and others who want to work effectively with data processing and data processing personnel will find it especially beneficial.

Major topics covered by the course include hardware and software, computer system operation, acquiring and using computer power, advanced computer systems, and computer impact on society.

Students will view twenty 30-minute weekly television broadcasts supplemented by a workbook/textbook with self-testing. Students will also be expected to participate in one on-campus seminar and one on-campus final examination. Telephone communication with instructors provides assistance when and if needed.

TV Broadcast Schedule

Each lesson will be broadcast three times so that students will have a choice of times to watch the lesson and also will have the opportunity to review lessons.

Broadcast Times

	M	T	W	TH	F	S	SUN
WETA, Channel 26	12 noon						
WNVT, Channel 53	7:00 p.m.						4:00 p.m.

Music 193 - Pop Music, U.S.A. (2 credits)

Radio Course — Starts January 13, 1975
Tuition — $12.50 for Virginia Residents
(Out-of-State is $42)

This survey course presents an historical overview of music in the styles of country/western, jazz/Afro-American, mainstream/middle-of-the-road and rock. The student has the option of listening to the ten 30-minute lessons on the radio or by audio tapes. (There is a service charge of $3.00 for use of the audio tapes.)

A project will be required of each student registered in the course. The nature of this project is to be arranged on an individual basis with the course instructor. All student learning will be off-campus. Faculty-student telephone or office conferences will be utilized as needed. A final examination will be at NVCC on the campus most convenient to the student.

Broadcast Schedule

This course will be broadcast several times a week so that students will have a choice of times to listen and will have the opportunity to review. There will be one lesson a week for ten weeks beginning January 13, 1975.

Broadcast Times

	M	T	W	TH	F	S	SUN
WGTS FM 90.1	5:30 p.m.				9:00 a.m.		
WPRW AM 1460							10:30 p.m.

MATH 01 - Developmental Math (5 credits)

Self-Instructional — Starts Anytime
Tuition — $31.25 for Virginia Residents
(Out-of-State is $105)

This developmental (preparatory non-degree) math course provides a sound foundation in the essential math skills needed for success in freshman level math courses. Instruction is adjusted to the student's own learning rate through the use of individualized, self-paced techniques. The course includes 13 topic modules for arithmetic and four programmed textbooks for Algebra I and Algebra II. The student's appropriate entry level is determined by diagnostic pre-tests. Progress throughout the course is measured by self-administered tests at the end of each topic or chapter. Supplementary instruction by telephone and/or campus visit is available when and if needed. Final exams will be administered on-campus by the instructor at the end of the 13 topics in arithmetic and at the end of books two and four of the Algebra series.

ECON 211-212-213 - Principles of Economics I-II-III (3 credits each)

Self-Instructional — Starts Anytime
Tuition — $18.75 per course ($56.25 for all 9 credits) for Virginia Residents
(Out-of-State is $21 per credit)

This sequence of three self-instructional courses covers the basic principles of economics. This will include the bearing of these principles on the present American economic conditions, as well as the structural and functional aspects of the economy. The student will study analysis, problems and issues relating to organization of business, labor and government institutions and economic stability and growth. In addition, measurements of economic activity, private enterprise, economic growth and stabilization policies, monetary and fiscal policy will be explored. International economic relationships will be compared and alternative economic systems defined.

Self-paced, programmed text allows for off-campus study/learning. Telephone communication with instructors provides student assistance when and if needed. Campus visit(s) are required for final examination(s).

Self-Instruction provides the opportunity for the students to use their valuable time most efficiently as well as progressing at a rate most comfortable to their ability.

Community Service Course-- Deflating the high cost of living

(Continuing Education Units Available)

Television Course — Starts January 6, 1975
Open to NVCC Students and Non-students

Inflation is our No. 1 national problem. The Extended Learning Institute is prepared to offer the consumer some help. "Deflating The High Cost Of Living" is a community service course based on the nationally broadcast series, "Consumer Survival Kit." The 26 television topics include: auto repair, supermarket strategy, land sales, debt/credit, funerals, used cars, over-the-counter drugs, weight control, shoes, home buying, cosmetics, air travel, tires, home improvements, moving, toy safety, floor coverings, condominiums, large kitchen appliances, mail order sales, health insurance, furniture, baby products, mobile homes, door-to-door sales and clothing. The Extended Learning Institute will make available the best written information on each of these topics and will sponsor three inflation-fighting seminars featuring leaders in the consumer field. For additional information regarding costs, continuing education credits, dates and schedules, please complete the attached information form or call 323-3379.

NORTHERN VIRGINIA COMMUNITY COLLEGE

EXTENDED LEARNING INSTITUTE - NVCC

In October, 1974, Northern Virginia Community College officially established a new division of the College, The Extended Learning Institute. The Extended Learning Institute is specifically designed to provide educational opportunities to those who may not be able to take advantage of the more traditional classroom oriented courses of the College. Included among the types of students who will be served by the new division are:

1. Persons who have children at home and cannot afford the time away from the children or the costs of babysitters.
2. Persons who are institutionalized - such as those in hospitals, nursing homes, and penal institutions.
3. Persons who work shifts that conflict with scheduled classes.
4. Handicapped students who have difficulty attending campus classes.
5. And those students who may be turned off by more traditional learning systems.

The educational experiences offered through the Institute have several important characteristics:

1. Courses are self paced -
   Students study and learn whenever they want and progress at a rate suited to their own abilities.
2. Course work is done off campus -
   Students study and learn wherever they may find it most convenient - at home or office, hospitals, nursing homes or at any other location of their choice.
3. Instructional material is mediated and individualized -
   Courses are offered by non-print media such as television, radio or audio cassettes and by print media such as programmed texts, workbooks and newspapers as well as by various multimedia combinations.

4. The educational experience is interactive -

Students are able to interact with faculty by telephone, mail or office visit. The Extended Learning Institute considers this an important element of the learning experience and makes an effort to encourage faculty/student interaction.

In order to be responsive to the needs of non-traditional students, The Extended Learning Institute has five major tasks to which it will address itself. These are:

First, to develop and offer credit and non-credit courses through non-traditional modes.

Second, to develop and offer educational/occupational guidance and counseling to students through individualized, self-administered systems.

Third, to develop and maintain an educational information clearinghouse through which Northern Virginia residents can identify educational opportunities necessary to fulfill their particular needs. This clearinghouse will also help Northern Virginia Community College and other educational institutions in Northern Virginia avoid duplication of services.

Fourth, the Institute will offer off-campus students developmental courses in areas such as Mathematics, English and Chemistry. These courses are designed to give students the basic proficiencies which will enable them to perform successfully in college freshman level courses, and,

Fifth, the Institute will develop and offer programs to increase the learning skills of off-campus students. Courses in study skills, reading skills and listening skills fall in this area. The Extended Learning Institute also believes that other special skills may be required of students if they are to be successful in non-traditional educational systems. For example, while these off-campus learning systems

offer advantages to the student - such as the ability to study when and where the student wishes - these systems also require self discipline and organization of time on the part of the student.

To date Northern Virginia Community College is presently responding primarily to task Number One by offering credit courses through The Extended Learning Institute. The other four tasks are in various stages of development. The process by which courses are selected is as follows:

First, the selection of courses to be offered by the Institute is accomplished using data which is collected from several sources. The goal in course selection is to determine the educational needs and interests of the community. Consequently, The Extended Learning Institute derived information about the community in a number of ways.

1. A random telephone survey conducted by Consumer Researcher, Inc. Each respondent was engaged in an interview lasting approximately 15 minutes which covered among other things, specific educational interests, types of delivery systems, costs students might be willing to pay and demographic information.
2. The College conducted a general survey of the educational interests of residents in the community.
3. The Extended Learning Institute conducted a survey of community interests in courses offered specifically through non-traditional means, and
4. The Institute contacted community agencies and organizations to further determine various needs and interests.

Once specific courses are identified, The Extended Learning Institute determines the current availability of already developed courses. These are then evaluated by the Institute staff on the basis of instructional design and production quality.

Those which The Extended Learning Institute finds acceptable are then evaluated by respective departmental faculty for thoroughness and accuracy of content. An important part of this process entails comparing the course objectives of on-going campus-based courses with the objectives of the proposed non-traditional courses. If these objectives are basically the same and both The Extended Learning Institute and the faculty agree on the quality of the course, the course is then implemented. Often there must be some modification of existing material to make it equivalent with the Northern Virginia Community College curriculum. These modifications often employ techniques such as additional readings, student projects, research papers or seminars.

Northern Virginia Community College faculty from all five campuses participate with The Extended Learning Institute on a variety of levels.

1. They help evaluate educational material being considered by The Extended Learning Institute as was just discussed.
2. They assist in the modification of existing material to make it fit the specific needs identified by Northern Virginia Community College.
3. They participate in the design and production of new educational material. For example, when a need is identified for which nothing suitable can be found, The Institute may develop the material at Northern Virginia Community College, and finally, they serve as instructor or monitor for any course offered by The Extended Learning Institute.
4. When a course is offered, a faculty member or a team of faculty is required as instructor or monitor for the course.

Students who wish to participate in courses through The Extended Learning Institute may register either by mail or at the regular registration periods scheduled on the five Northern Virginia Community College campuses. Procedures have

been modified so that new students to Northern Virginia Community College can apply for admission to the College and register for a course at the same time. Entering a course is therefore simplified for students. This is made possible largely because of the open door policy of admissions of the Virginia Community College System. Registration is continuous for all courses with the exception of those courses timebound by broadcast television of radio schedules. Since most courses are individualized, however, students can enter at any time. All courses do have a time limit for completion, however. Presently, this ranges from 140 days to one year depending on the nature of the course.

When a student has registered in a course, The Extended Learning Institute then sends the student a packet of materials which includes:

1. A statement of course requirements - this includes course objectives and a description of all work to be completed by the student.
2. Administrative procedures informing the student of such things as the means of dissemination and due dates of materials
3. A listing of materials required and where to get them.
4. Directions for contacting faculty for assistance or to discuss course content.
5. The location and hours of learning resource centers and book stores.
6. Other special course related material such as:
   a. Student contract
   b. Diagnostic tests
   c. Broadcast schedules and other material unique to a particular course.

During the course the students have two sources of help available to them. If they have questions about the administration of the course, they can contact The

Extended Learning Institute. More importantly, they can always contact a faculty member for content related questions. This contact can be done by telephone, mail or by scheduling office visits. For students whose schedule makes it difficult to telephone during regular hours, the Institute has a telephone answering service available 24 hours a day so students can call and leave questions. The faculty and staff respond quickly as possible.

There are no regular attendance requirements and students do most course work at their own pace. They have the primary responsibility for completing their work. However, The Extended Learning Institute feels that some responsibility for student participation does rest with the Institute. Therefore, a chronological file has been established which is used to initiate correspondence with students at three times in a course.

First, if by a certain time after registration a student has not completed the first step in a course, such as returning a diagnostic test or a contract, a letter is sent as a reminder.

Second, if by a certain time following the completion of the first step, if the student has returned no further work, or made no further contact with The Extended Learning Institute, a letter is sent suggesting to the student that he review his progress and asking if he needs any help.

Third, at a specified time prior to the end of the time allowed for completion of the course, students are sent a letter reminding them of the approaching end date and reviewing the requirements they must complete if they wish to receive a grade. They are also reminded that if they do not complete the course by the required date, there are two options:

a. If they are making satisfactory progress, they will receive an R grade which means they should reenroll in the course to complete the requirements, or

b. If they are not making satisfactory progress, they will be dropped from the course and given a W grade.

The Extended Learning Institute offered courses for the first time beginning in January, 1975. These courses were announced through traditional means, college class schedule, newspaper and radio announcements. The Institute also mailed a brochure to every household in northern Virginia which explains what The Extended Learning Institute is and announced the course offerings. This brochure also contained a questionnaire about community interests. The first course offerings were:

1. DAPR 106 - Principles of Data Processing (3 credits)

   This is a television based course designed as a broad introduction to Data Processing and computing.

2. MUSIC 198 - Pop Music, U.S.A. (2 credits)

   This radio course presents an historical overview of American popular music in the styles of country/western, jazz/Afro-American, mainstream/ middle-of-the-road and rock.

3. MATH 01 - Developmental Mathematics (5 credits)

   Students in this print base course take a diagnostic test and their work is individually prescribed on the basis of their particular needs.

4. ECON 211-212-213 - Principles of Economics I - II - III (3 credits each)

   This sequence of three self-instructional print base courses covers the basic principles of Economics.

5. Community Service Course - Deflating the High Cost of Living

This combination television, seminar course deals with ways to cope with rapidly increasing cost of living.

Enrollment statistics from these first courses are encouraging. The total enrollment as of February 12, 1975, was 708. Of this number 373, or 53%, of the students were new students to Northern Virginia Community College. The mean age of the new students was 35.6 years, approximately seven years older than the average Northern Virginia Community College student and 216, or 58% were female. The enrollment by course shows high interest in Data Processing, Developmental Math and Economics.

Principles of Data Processing	-	229
Pop Music, U.S.A.	-	51
Developmental Math	-	201
Principles of Economics I	-	161
Principles of Economics II	-	45
Principles of Economics III	-	21
		708

The community service course was cancelled because of low enrollment. This was possibly due to the fact that the course was closely tied into a television series offered on public broadcasting and, even though there were other important aspects to the course, potential students saw the television component as primary and did not wish to pay for something they felt they could receive free. The Extended Learning Institute is presently investigating alternative systems for community service courses.

Two credit courses are presently being designed and produced by The Extended Learning Institute. Both of these are television courses and both should be complete by fall of 1975. Art America is a series of 20 half hour, color television programs tracing the achievements of Americans in the visual art from colonial times to the present. The theme of each program in this series is the development of American art within the context of American culture and the National Experience.

The second course, Keep It Running, is designed for those persons who will find the study of their own automobile helpful, interesting and cost effective. The course taught and hosted by two women, is designed to show the workings of the the various systems of the car, how to keep them working properly and what to do if they are malfunctioning.

The Extended Learning Institute is also currently preparing additional courses in such areas as developmental and freshman English, and in basic business, to name only a few.

A formal evaluation of the initial offerings of the Institute is being conducted. This will encompass students reactions to the courses and to the administrative systems, and will supply The Extended Learning Institute with demographic information about the students who participated in the courses. This instrument will also enable students to voice any concern, likes, dislikes or ideas they may wish to share with The Extended Learning Institute.

The Extended Learning Institute at Northern Virginia Community College sees itself as an alternative educational system which will be constantly changing as it endeavors to serve a special segment of the Northern Virginia Community.

COMMUNITY COLLEGE ASSOCIATION
FOR INSTRUCTION AND TECHNOLOGY

Concurrent Session

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Evaluation of Instructional Development

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After Dr. Trowbridge completed her doctoral studies under Dr. Gabriel Ofiesh at the Catholic University of America in 1971, she became affiliated with Washington Technical Institute where she developed a number of programs and courses. She has traveled extensively in a consultant capacity.

Copy of the paper delivered at the C.C.A.I.T. Conference, Alexandria, Virginia
Spring 1975

EVALUATION OF INSTRUCTIONAL DEVELOPMENT

by: Dr. Virginia C. Trowbridge
Coordinator of Learning Systems
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I. Introduction

Good morning! Welcome to the evaluation of instructional development! When you first came in here you were given a sheet of paper and asked to draw a tree. If you look on the transparency you will see that there are 12 trees. Psychologists can tell a little bit about your personality by looking at the tree which you drew. For instance, if you drew #1 tree, which is rather long and thin, it often indicates confidence, pride and enthusiasm and ambition. Whereas, if you did a short, round one, as in #2 with droopy leaves or droopy sides, it indicates that you are non-aggressive; a bit moody and you don't like to make decisions. A tree like #3 indicates that you have imagination and can adjust easily. I could go on and tell you more about these various kinds of trees and the interpretation of them but why draw a tree? If I were a psychologist and I wanted to find out something about your personality and your personal projections, this would be a good test. It would be a good test because it has been proven to test your projection. But why does one evaluate?

II. Why Evaluate?

There are many reasons--some very pragmatic, some rather esoteric and a few scientific. Although it is usually advantageous or essential to appraise what

has happened and what is happening as a result of expenditures of effort and money, at times evaluation has not been effective simply because the reasons for assessment were either poorly defined or not defined at all. Today, I would like to explore the rationale for evaluation, the types of evaluation and strategies for implementing evaluation and validation. Since I have drawn quite heavily from several authors I will digress momentarily to give credit to those sources.

Resources

Principles of Educational Measurement and Evaluation - Gilbert Sax
Wadsworth Publishing Company, Inc., Belmont, California 1974

Sax has a very practical overview of evaluation which is beneficial to teacher and administrator alike. The book runs the range from the writing of simple to complex test items to the computation of sophisticated statistical testing. Very practical step-by-step procedures for computing complicated-looking formulas are one of the positive aspects of the appendix.

Measuring Instructional Intent - Robert F. Mager, Fearon Publishers,
Belmont, California, 1973.

Mager humorously does it again! A practical application of matching behavioral objectives to test items, then verification that the test item actually measures what you INTENDED to measure.

Measuring Educational Achievement - William J. Micheels and M. Ray Karnes
McGraw-Hill Series in Education, New York, 1965.

Although this is an "oldie" with several revisions, it is one of the most practical hands-on guide for those persons needing to evaluate performance in the psycho-motor and/or vocational and skill areas.

How to Meet Accountability with Behavioral Objectives and Learning Hierarchies - Marvin Cook and Henry Walbesser, University of Maryland, College Park, 1973.

How-to develop hierarchies is the strength of this book. Matching of objectives with accountability is the basis for sound evaluation, according to the authors.

An Approach to the Design of Mediated Instruction - C. Edward Cavert, AECT (Association for Educational Communications and Technology), Washington, D.C., 1974.

Procedures developed for the project Assert (public schools, Lincoln, Nebraska), provide a guide and operational framework for assessing instructional materials both in-development and developed.

Draft Guidelines for the Evaluation of Career Education Programs - U.S. Office of Education, Department of Health, Education and Welfare, Washington, D.C., 1974.

Evaluation is viewed as a cybernetic process beginning with the development of a plan to reach certain goals or results, followed by implementation of the plan and evaluation of the results. Based upon the results of the evaluation, the original plan is revised or improved as appropriate, again implemented and the results evaluated again. Evaluation is defined as the process of "examining present performance in order to improve future performance".

Rationale for Evaluation

According to Sax, tests are administered with the expectation that, from the results, one will be better able to make decisions with a minimum of risk. When this definition is applied to the development of instructional materials, it

becomes apparent that evaluation must be of two types, formative and summative. Formative evaluation is the process of analyzing instruction during the design phase in order to either verify or modify that instruction. Summative testing is the process of analyzing results in actual operational settings in which one measures or assesses the actual responses of the intended target population. In essence, it is post-development evaluation.

Formative Evaluation

According to Tom Lawson, formerly with the Center for Instructional Research and Curriculum Evaluation of the University of Illinois and currently with 3-M Company as an instructional assistant analyst, the major purpose of formative evaluation is to give descriptive and judgmental data which will thereby enable one to make more rational decisions relative to the design of instructional software and systems.

Formative evaluation data is obtained from both the source of information and the activities. Internal information is gathered by inspecting the product, whereas, external information is derived from the effect that the product or component has upon the behavior of the learner, the parents, relevant groups, instructors, etc. Contextual information - that domain under which the materials are expected to function, covers anything from the learner's characteristics to the actual context of the curriculum.

There are four categories of "activities" in formative evaluation. The first category of Pre-Development includes areas such as needs assessment and

occupational analysis. The category of Evaluation of Objectives attempts to ascertain the relative worth of the objectives, i.e., whether the objectives are operational, feasible and possess context validity, etc. The third category, Formative Interim Evaluation, utilizes the content expert's opinion in regard to the analysis of the content. The final category of Formative Product Evaluation assesses the cost analysis, hypothesis, and test construction through the use of the "expert's" professional judgment.

Based upon the data received from this formative evaluative study, one begins to determine whether an instructional procedure or element was effective. A detailed analysis would next be made of such factors as the qualities of the product, the target population, the context situation and the effects produced by the product in the cognitive-affective-psychomotor domain, the approach/avoidance behavior, etc.

Summative Evaluation

Whereas formative evaluation tests all segments, both during the design and during the field implementation, summative evaluation measures the achievement of critical objectives after-the-fact, i.e., the results of the instruction in actual use. Testing in the systematic design of instruction will verify the degree to which objectives are achieved by the target population. The information gathered is utilized as much for the revision of the materials as for learner diagnosis.

Testing Procedures

Cavert noted in his book that: "in psychometry for instructional design, testing responsibilities are limited to finding out if objectives were achieved - if instruction made the learner respond as expected, under the conditions specified, to the degree of accuracy stated or implied (and for reasons that make sense to the learner)."

(Pre-tests) - Entry level of the target population must be ascertained, both to determine readiness and ultimate learning gains.

(Interim tests) - Progress-toward-terminal-objectives evaluation allows one to assess the materials relative to sequence, level of difficulty and cognitive level of learning.

(Post-tests) - Exiting performance may test one or multiple capabilities with one final performance test, such as ability to perform an acceptable venapunture.

Regardless of the time of testing (pre, interim, post) one attempts to determine whether the intended goals or objectives were accomplished. Individual test items are discussed in the previously mentioned books.

The criteria against which test results will be assessed not only determine the kind of test instrument but also the level of acceptable performance. This, of necessity, mandates that the instrument determine the degree of accomplishment of the objectives as well as provide direction for modifying the developed material. Formats will differ for these tests based upon whether the test is self-administered, monitored, or mediated.

Norm-Referenced Vs. Criterion-Referenced Evaluation

Norm-referenced evaluation is based upon the Bell-shaped curve and the deviation from central tendency. Criterion evaluation sets up a standard which the student must meet in order to proceed. The chart below compares where the two types of evaluation differ.

	NORM-REFERENCED EVALUATION	CRITERION REFERENCED EVALUATI
Purpose:	Measure/compare one's performance with the group norm	Measure/compare one's performance against established performance objectives with clearly defined standard of acceptable performance.
Focus:	Discriminate among students	Mastery of previously stated objectives.
Grades:	Passing is determined by distribution on normal curve. Assignment of grades or rank on curve	No constraint on number who may pass. "Go/no-go" situation.
Meaning of Grade:	Passing grades may not meet minimal standards of performance. May reflect attainment of non-crucial items	Passing grade reflects attainment of specified learning.

Valid test items which will reflect the criterion-referenced viewpoint should possess the following characteristics. They test toward objectives. The items are non-biased and provide consistency in scoring. They are feasible from the viewpoint of economy, personnel, equipment, time and space. Finally, they must be free of language and/or format errors.

Testing Confidence

Standardized tests usually have well established reliability, validity, and objectivity. However, tests are usually developed for use with mediated materials and are not standardized. Therefore, they should be carefully developed and evaluated to achieve this same reliability, validity and objectivity. Utilization of testing and content specialists is a necessity at this stage of the development.

Conditions of Testing

A well developed instructional unit can be expected to work equally well when presented to a comparable group. During the formative stage of development, one must utilize a profile of the target population which addresses the characteristics of the intended audience.

The exposure to instruction should represent, as closely as possible, the actual operational situation. This may be accomplished by a representative sample through in-house distribution or field distribution. In some instances, it may be wise to test via open distribution (such as television) in order to test a sample in a wide, geographic area.

Validation

A program of instruction, a systematic package, is said to be "validated" when the tested instruction will give consistent results when used under specified conditions with a specific target audience. This validity may be Empirical (face value relative to design standards, production standards, aesthetic standards, and use standards); Absolute (judgments by the experts relative to the consistency

of the material - learning, instructional and educational) or Relative Validity (appropriateness of the content, the adequacy of the performance and the relevance of the instruction).

Extended Learning Institute

The Extended Learning Institute is currently producing two television courses (Art America: 200 years of American Art History, and Keeping It Running, an auto-mechanic course for the layperson.) Following an assessment of need for the courses, an in-depth definition of the crucial objectives of the course and various strategies were explored. Feasibility of paper/pencil; audio, with paper/pencil, etc. from the least expensive to produce up to the most expensive modality. The decision to use television was arrived at after evaluation of the need for motion, audio, vision and verbal plus desire for cost effective instruction. Professionals from the content area, media fields, educational technology and "the real world" were used to assess needs, objectives, strategies, feasibility, evaluation procedures and feedback modification plans.

As each step was completed, it was evaluated by representatives of the above fields and from the intended target audience. Modifications during the formative stages are based upon the resultant feedback. Summative evaluation and modification will be accomplished under actual conditions at the conclusion of the first full session of the 20 half-hour video tapes with the accompanying textbook, student books, interim testing procedures and final examination.

CONCLUSION

The Talmud is credited with stating that, if you don't know where you're going, any road will get you there, but you won't know when you've arrived. Evaluation is possible and is necessary! A systematic instructional development will begin and end with evaluation that is designed to assess whether the student arrived at the destination. The destination being the performance, learning behavior specified and communicated to the student, prior to entry into the program.

Information obtained from along-the-way (formative) evaluation is used to modify the system toward optimum student accomplishment of the objectives. After-the-teaching (summative) evaluation will determine if you were a success, a near-miss, or missed the target. In any case, it will probably mean a back-to-the-drawing-board for a few revisions.

The ultimate aim of better instruction with better learning makes the effort worthwhile.

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NORTHERN VIRGINIA COMMUNITY COLLEGE
ALEXANDRIA CAMPUS
MAY 2-3, 1975

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NORTHERN VIRGINIA COMMUNITY COLLEGE

THE ALEXANDRIA CAMPUS

- a campus designed as a total learning environment, where flexibility and multiple use of space encourages responsiveness to changing technologies

- a campus designed for maximum communication, where students, faculty and staff work, study and learn in a setting which encourages interaction

- a campus designed to accomodate variations in styles for learning and instructional techniques

- a campus designed with functional space relationships which promote the exploration of educational systems innovation and individualized learning towards mastery concepts

The Alexandria Campus was awarded a special citation by the American Association of School Administrators for the 1972 Exhibition of School Architecture.

VIRGINIA COMMUNITY COLLEGE SYSTEM

NEW SITE, NEW FACILITIES

The new site is Phase I of a projected four-phase megastructure. Future stages of construction will bring all classrooms together on the New Campus site. Facilities currently retained at Bailey's Crossroads are an integral part of the Alexandria Campus.

PHASE I FACTS.....

Project cost - 4.2 million
Gross area - 120,384 sq. ft.
Total assignable square feet - 76,856 sq. ft.
Square foot cost - $24.64
Building cost - 3 million
Equipment cost - $400,000
Architects - LBC&W of Virginia
Bailey's Crossroads Classrooms - 23,000 sq. ft.
Population of service area - 500,000 projected by 1980

COMPUTER-ASSISTED INSTRUCTION.....

In the fall of 1972, it was announced that the Alexandria Campus had been selected as one of two demonstration sites for a large-scale CAI system referred to as TICCIT (Time-shared, Interactive Computer-Controlled Information Television). TICCIT is funded by a multi-million dollar grant to MITRE Corporation. Computer hardware and software are being developed by MITRE in McLean, and the course materials (Math and English) are being developed at Brigham Young University. Evaluation of the Project is being conducted by Educational Testing Service.

NVCC personnel have participated in the authoring of course materials at Brigham Young and are presently engaged in planning for the 16-month demonstration which will begin in the fall of 1974.

NEW FORMS, NEW FUNCTIONS

In a total learning environment, space forms follow functions. Faculty offices, conference workrooms, dispersed counseling, audio-visual services, learning laboratories, library, special study areas, career placement, and tutoring are placed in an adaptation of office landscaping at the hub of the campus in a center for learning resources.

In an open learning environment students and faculty work and study in a barrier-free setting. Restrictions of time and enclosed space are removed through combining related activities and expanding operational time-frames.

Open and combined areas include:

- Biology, Chemistry and Physics--a unified laboratory for the Natural Sciences...
- Typing, Business Machines, Magnetic Tape and Cards, Date Communications--a total Business skills center...
- Fine Arts and Commercial Art--as interrelated studio laboratories...
- Automotive Laboratories, Drafting rooms, Engineering-related classrooms--as a coordinated facility...
- Audio-visual studios, instruction and practice rooms, classrooms, reprographics, photo lab and graphics services--in combined Media Services area...
- Listening lab, reading lab, testing area, CAI programs, tutorial assistance and other individualized programs--in an open Learning Laboratory equipped and staffed to provide for individualized learning and to support instructional programs...
- Lecture area, recital hall, performance/production, concerts, speech, discussion, social interaction and registration services--in a three in one multi-unit instructional and activity area...
- Lawn seating for performance, air enclosure for physical education and campus events--in planned outdoor settings...

NORTHERN VIRGINIA COMMUNITY COLLEGE

RENEWAL OF GOALS

THE LEARNING ENVIRONMENT IS THE CAMPUS COMMUNITY; WHERE THE CLIMATE IS DESIGNED FOR FLEXIBILITY AND FOR THE CAPABILITY OF SHIFTING WITH EASE INTO THE FUTURE; WHERE THERE IS ACCESS TO THE HUMAN RESOURCES AND TO THE MATERIALS; AND WHERE THE STUDENT, THE COMMUNITY AND THE COLLEGE MEET IN A HARMONIOUS RELATIONSHIP TOWARDS THE GOAL OF SUCCESSFUL ACHIEVEMENT.....

A MULTI-CAMPUS INSTITUTION

A--ALEXANDRIA CAMPUS--3001 North Beauregard Street, Alexandria, with additional classrooms at 5411 South Carlin Springs Road, Bailey's Crossroads, Virginia

N--ANNANDALE CAMPUS--8333 Little River Turnpike, Annandale, Virginia

L--LOUDOUN CAMPUS--Under construction on Route 7 in Loudoun County at State Route 637. Mailing address: RR2, Box 169, Sterling, Virginia

W--MANASSAS CAMPUS--Under construction off Route 66 on State Route 234. Office: 10102 Leonard Drive, Manassas, Virginia

W--WOODBRIDGE CAMPUS--Site adjacent to Route 95 and State Route 638 in Prince William County. Office: 8620 Rixlew Lane, Woodbridge, Virginia

ALEXANDRIA CAMPUS, 3001 NORTH BEAUREGARD STREET, ALEXANDRIA, VIRGINIA 22311, TELEPHONE 703/323-4285

NORTHERN VIRGINIA COMMUNITY COLLEGE

Alexandria Campus

A Statement of Philosophy

The Alexandria Campus of Northern Virginia Community College, located on the western edge of the city, serves a number of economically disadvantaged students and a high proportion of adults in continuing education, as degree candidates, in vocational programs, and for upgrading occupational skills. The Alexandria Campus is served by public transportation. The design provides accessibility for handicapped students and faculty. A thorough study of instructional goals led to the preparation of detailed educational specifications for the new campus. It is designed for maximum flexibility, with the concept of the Learning Resource Center at the heart of the institution, providing support for all phases of the instructional program.

The Learning Resource Center has assumed its share of the campus responsibility for providing successful educational experiences to its students. Staff members are selected, in addition to meeting standard criteria, for qualities as subject specialists and a dedication towards the principle of service; they must be people-oriented rather than object-oriented.

The campus design supports the efforts of the institution to be a total learning environment, with an intensive dispersed counseling program, a student-motivated and student-supported tutorial program, and by consistent awareness of the student as an individual from the first point of contact through his entire relationship with the college. Faculty offices are completely open through a method of office-landscaping, in which the student has immediate access to all the resources.

Additional information about the Alexandria Campus and the LRC philosophy:

Bisdorf, Donald and Gloria Terwilliger. "A team approach to campus planning.", American School & University, November, 1971.

Terwilliger, Gloria. Review: "Nonbook materials" by Weihs, Lewis, and McDonald, in College and Research Libraries, November, 1973, p. 487-489.

Terwilliger, Gloria, "The Learning Resource Center: What it is and how to use it", in New Directions for Community Colleges, Jossey-Bass Spring, 1974.

"The Learning Resource Center...The Heart of the Alexandria Campus, NVCC," in Micropublisher, May-July, 1974.

Terwilliger, Gloria, "Exploring Learning Resources: A Team Approach," in New Directions for Community Colleges, Summer, 1975.

ORGANIZATIONAL CHART
Learning Resource Center
Alexandria Campus

- Campus Provost
  - Director of LRC — Secretary
    - Coordinator, Audio-Visual Services
      - Materials Design & Production
        - Photo Lab
        - Audio Reproduction
        - TV Production
        - Graphics
        - Duplicating Services
      - Equipment Distribution & Utilization
        - Evaluation
        - Requisition
        - Inventory Control
        - Instruction
        - Maintenance & Repair
      - 16mm. Film Program
        - Evaluation
        - Procurement
        - Distribution
    - Coordinator, Library Services
      - Materials Preparation & Processing
        - Books
        - Periodicals
        - Pamphlets
        - Microforms
        - Sheet Music
        - Recordings & Phonodiscs
        - Film & Filmstrips
        - Slides & Transparencies
        - Other forms of Media
      - Acquisitions
        - Materials Selection
        - Material Evaluation
      - Materials Dist. & Utiliz. Print & non-print
        - Reference
        - Reserve
        - Circulation
        - Instruction
        - Current Awareness
    - Coordinator, Learning Laboratories
      - Individualized Instruction Services
        - Study Skills Lab
        - Audio Lab
        - Testing Lab
        - Tutoring Lab
        - Reading Lab
        - CAI Lab
        - Media Reserves Lab
      - Instructional Development Services
        - Curriculum Development
        - Instructional design
        - Systems design
      - College Staff
      - Media Processing Center
        - Acquisitions (books)
          - Ordering
          - Receiving
        - Cataloging
          - Union catalog
          - Shelf lists
        - Distribution
        - Interface with Computer Center
          - Circulation system
          - Master cards
          - Other

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INFORMATION